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FIFTH  
ANNUAL REPORT

OF

THE DIRECTORS

OF THE

PENNSYLVANIA RAIL ROAD COMPANY,

TO

THE STOCKHOLDERS.

FEBRUARY 2, 1852.



PHILADELPHIA:  
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1852.



# DIRECTORS, 1852-1853.

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BY THE STOCKHOLDERS.

JOHN EDGAR THOMSON,	GEORGE W. CARPENTER,
DAVID S. BROWN,	CHRISTIAN E. SPANGLER,
THOMAS T. LEA,	WASHINGTON BUTCHER,
JOHN YARROW.	

BY THE CITY OF PHILADELPHIA.

GEORGE HOWELL,	EDWARD M. DAVIS,
ALEXANDER J. DERBYSHIRE.	

BY THE COMMISSIONERS OF ALLEGHENY COUNTY.

WILLIAM WILKINS,	WILLIAM ROBINSON, Jr.
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BY THE COMMISSIONERS OF SPRING GARDEN.

WILLIAM AYRES.

PRESIDENT.

JOHN EDGAR THOMSON.

TREASURER.

GEORGE VAUX BACON.

SECRETARY.

THOMAS T. FIRTH.

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NOTE.—Since the Election for Directors on February 2d, 1852, the following gentlemen have resigned as Directors:

DAVID S. BROWN,	Elected by the Stockholders.
THOMAS T. LEA,	Do do do
EDWARD M. DAVIS,	Elected by the City of Philadelphia.

And the following named Gentlemen have been elected:—

WILLIAM R. THOMPSON,

to supply the vacancy occasioned by the resignation of Edward M. Davis,  
and for the unexpired time of said Director.

SAMUEL JEANES,

EDWARD T. MOTT,

to supply the vacancies occasioned by the resignation of David S. Brown  
and Thomas T. Lea.



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# FIFTH ANNUAL REPORT.

Office of the Pennsylvania Rail Road Co.

Philadelphia, January 31, 1852.

THE Board of Directors present to the Stockholders of the Pennsylvania Rail Road Company, a statement of its affairs, for the year ending 31st ult., together with the reports of the Treasurer, Chief Engineer, and General Superintendent.

The Treasurer reports receipts from Stockholders,

in payment of instalments, - - - -	\$8,103,465 00
Disbursements, - - - -	7,978,089 82

Balance on hand, in cash and bonds, - - -	\$125,375 18
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The interest account exhibits results equally gratifying with those heretofore announced to the Stockholders; the amount chargeable to construction account, viz., the balance of the interest account, from the commencement of the work to the 31st ult., after deducting therefrom the net receipts from the road, since it has been in use, being only \$241,571 07.

The unconditional subscriptions to the capital

stock of the Company amounts to 166,521

shares, - - - -	\$8,326,050 00
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Contingent subscriptions, payable whenever they

shall, in connexion with other subscriptions,

made on or after the 24th February last, make

up the sum of three millions of dollars.

City of Philadelphia, 15,000 shares, - - -	750,000 00
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District of Northern Liberties, 5,000 shares, -	250,000 00
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The stock payable to contractors, in settlement of

outstanding contracts upon the Western and

Mountain Divisions, estimated at 5,000 shares,	250,000 00
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Making in all the sum of, - - - -	\$9,576,050 00
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Further subscriptions, to the extent of \$423,950, will be necessary to fill up the capital stock to its present limit of ten millions of dollars. In order to secure the conditional subscriptions of the City of Philadelphia and the District of the Northern Liberties, heretofore alluded to, an immediate subscription of \$283,150 is indispensably necessary.

The Board have, in view of the unpropitious state of the money market, delayed asking for additional subscriptions until the latest possible period. The exigencies of the Company render further postponement impracticable, and the Board invite the attention of the Stockholders to the urgent necessity which exists, for raising this sum during the ensuing month, leaving to their wisdom the adoption of whatever measures may be best calculated to secure it. It will be seen, by reference to the report of the

Chief Engineer, that the estimate of the cost of	
a single track road between Harrisburg and	
Pittsburg, with the necessary outfit, is	- - \$12,000,000 00
And the cost of an additional track, estimated at	3,600,000 00
Making an aggregate of	- - - - - \$15,600,000 00

When the cost of freight and passenger depots at Philadelphia, and the outlay for the additional rolling stock, which will be required when the second track shall be brought into use, with the necessary expenditure for the depot lots at Pittsburg, and other purposes, shall have been added to this estimate, it will be seen that the capital stock must be increased, or debt incurred, to the extent of between six and seven millions of dollars.

A section of the Western Division, extending from Johnstown to Lockport, twenty-one miles, was opened in August last, and that division is now in use throughout its entire length, with the exception of a gap of twenty-eight miles, between Beatty's Station and Turtle Creek, in Westmoreland County. Every effort has been made by the Board to hasten the completion of the work, and they still cling to the hope, that the whole road will be ready for use before the close of canal navigation in 1853.

The business of the year, although materially affected by an unusual-continuance of low water in the Ohio river, and the Western Division of the Pennsylvania canal, and other adverse circumstances, shows a net profit of \$347,864 82, as will appear by reference to the report of the Treasurer.

This result confirms the opinion heretofore entertained, that the earnings of the road will henceforward pay the interest upon the outlay, after making adequate provision for depreciation and contingencies. It is proper to state, however, that immediate pecuniary results have very little weight with the Board, in the adoption of the policy which has heretofore governed their administration of the affairs of the Company.

Great as have been the reductions made through the instrumentality of this Company, the people of Pennsylvania have yet to learn what low prices are. The Rail Roads of Boston, managed by her most sagacious merchants, have, by the adoption of this system, given to that city the growth of a quarter of a century, within the last five years. It is for the Pennsylvania Rail Road to perform the same office for Philadelphia on the one hand, or to fall with her into a state of premature decrepitude on the other.

In pursuance of this policy, the Board have determined to reduce the first class passenger fare, from and after the 1st of March next, to a uniform rate of two and a half cents per mile. The extension of this rate to the roads owned by the Commonwealth, and its effect upon the through fare, will depend upon the result of negotiations now in progress with the Board of Canal Commissioners. Under an agreement with that body, emigrants have been transported from Philadelphia to Pittsburg, at a fare of \$3 75, and the business promises an increase of revenue to the State as well as to the Company.

An arrangement was made with the Canal Board during the past season, by which it was expected to secure the transportation of some five millions of feet of lumber annually, from the Clearfield region; circumstances of subsequent occurrence, induced the Commissioners to add sixty-six and two-thirds per cent. to the reduced maximum toll originally agreed upon, and their present charge is in effect a prohibitory tax.

It is due to these gentlemen to say, that they have always met the wishes of the Board in a proper spirit, but they are still to some extent fettered by a system of high charges, the abandonment of which must be left for time and their own good sense.

The dilapidated condition of the Columbia Rail Road has been a source of much anxiety to the officers of this Company, as well as to those of the Commonwealth, to whose charge it has been committed, and negotiations are now pending, upon conditions of mutual advantage, for a sufficient quantity of iron to relay the entire north track between Columbia and the junction with the new road, near Whitehall.

If this arrangement shall be effected, it will add materially to the revenues of the State, while it will accelerate the speed and lessen the risk of transportation by this Company.

Warned by the costly experience of other companies, in the enormous advance paid for the additional ground required from time to time as their business increased, the Board determined to secure at the outset, ample space for the accommodation of the business of the Company, at the eastern terminus of the Columbia Rail Road. They accordingly purchased, upon ground rent, the city lot west of the Permanent Bridge and the Powelton Estate, together with a small intervening lot, for cash.

The owners of Powelton, in the absence of a judicial decision or

of specific legislation, declined conveying that estate to the Company, and seven Directors voluntarily became liable, on behalf of the Company, for the payment of the annual rent. The property is still held in their individual names, where it must remain until the action of the legislature or a decision of the Supreme Court shall remove all doubt as to the right of the Company to hold real estate beyond the termini of its own road.

The Board congratulate the Stockholders upon the partial opening of the Ohio and Pennsylvania Rail Road, and upon the advantages already accruing to this Company, from a direct connection with Cleveland, and through that city with central and southern Ohio.

The credit of this Company, if it shall be deemed advisable by the Stockholders to use it at all, may be judiciously employed hereafter in aiding, to a moderate extent, this and other important western connections, whose success is scarcely less necessary to the concentration of trade and travel upon Philadelphia, than the completion of the Pennsylvania Rail Road itself.

BY ORDER OF THE BOARD.

W. C. PATTERSON,  
*President.*



# The Treasurer Reports

AMOUNT RECEIVED FROM STOCKHOLDERS IN PAYMENT OF

Instalments, - - - - -				<i>Dolls.</i>	<i>C.</i>
				8,103,465	00
<b>AMOUNT EXPENDED.</b>				<i>Dolls.</i>	<i>C.</i>
EASTERN DIVISION.					
Graduation and Masonry,	-	\$1,891,800	38		
Superstructure, Ballast, Bridges,					
Iron Rails, Sills, Ties, Chairs,					
Spikes, &c. &c., - - -		1,668,132	32		
Engineer Department, - -		169,016	84		
Land Damages, Fencing, Real					
Estate, Right of Way, - -		266,014	97		
Station Houses, Warehouses,					
Foremen's Houses, Machine					
Shops, Repair Shops, Water					
Stations, - - - -		185,074	64		
Harrisburg and Lancaster Rail					
Road Repairs, - - - -		5,209	31		
				4,185,248	46
WESTERN DIVISION.					
Graduation and Masonry,	-	\$1,747,620	60		
Superstructure, Ballast, Bridges,					
Iron Rails, Sills, Ties, Chairs,					
Spikes, &c., - - - -		945,629	85		
Engineer Department, - -		141,865	58		
Land Damages, Fencing, Real					
Estate, Right of Way, - -		104,338	34		
Station Houses, &c., - -		33,539	56		
				2,972,993	93
Organization and Expenses of Board, - -				86,177	87
Locomotives and Cars, - - - -				488,219	88
Lost Baggage, - - - -				339	53
Car Sheds, - - - -				3,539	08
Interest chargeable to cost of construction,					
being the balance of interest account, -				241,571	07
Balance in hands of Agents and Treasurer, -				125,375	18
				8,103,465	00

[ E. E. ]

GEORGE V. BACON, *Treasurer.*

*Philadelphia, January 1, 1852.*

**STATEMENT**  
 SHOWING THE RECEIPTS AND EXPENDITURES  
 OF THE  
**TRANSPORTATION DEPARTMENT,**  
 FOR THE YEAR 1851.

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**RECEIPTS.**

|                                   |                     |
|-----------------------------------|---------------------|
| From Mails and Express, - - - - - | \$23,074 50         |
| Freight, - . - - - - -            | 326,827 38          |
| Passengers, - - - - -             | 404,771 70          |
|                                   | <u>\$754,673 58</u> |

**EXPENSES.**

|                                     |                            |
|-------------------------------------|----------------------------|
| *Conducting Transportation, - - -   | \$210,328 33               |
| Motive Power, - - - - -             | 91,086 74                  |
| Maintenance of Way, - - - - -       | 50,057 93                  |
| Maintenance of Cars, - - - - -      | 18,150 83                  |
| Allegheny Portage tolls, &c., - - - | 37,184 93                  |
|                                     | <u>406,808 76</u>          |
| † Net Receipts, - - -               | <u><u>\$347,864 82</u></u> |

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\* Including Tolls and other Expenses on Columbia and Harrisburg and Lancaster Rail Road.

† As shown by the books of the Treasurer, January 1, 1852. The actual net revenue, after the payment of all bills against the business of the year, is \$332,925 30, as far as ascertained.

# FOURTH ANNUAL REPORT

OF

## THE CHIEF ENGINEER.

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Engineer Department, Pennsylvania R. R. Co.  
Philadelphia, January 15, 1852.

To the President and Directors of the  
Pennsylvania Rail Road Company.

GENTLEMEN :—In submitting the Annual Report of this Department, I have the gratification to state, that the several sections of the Western Division of the road, promised to be placed in readiness for use during the past year, were transferred to the control of the transportation department, at the periods anticipated.

In consequence of the limited number, and riotous disposition of the laborers, we scarcely expected—early in the season—to accomplish this important object. But a timely reinforcement, secured through a judicious arrangement made by the contractors, facilitated by the free transportation of men to Johnstown by this Company, at once restored peace to the line, and instilled new life into the operations upon the road. Immediately after this accession of force, it became apparent, that by vigorous and unceasing efforts, our wishes could be realized, which were gratified by the completion of the portions of line referred to, on the 10th ult. At that time thirty-three miles of road was brought into use, including eleven and three-fourths miles from Pittsburg to Brinton's, (on Turtle creek,) and a branch of two and three-fourths miles to Blairsville; making, with the twenty-two miles opened in August, fifty-seven miles of road finished during the year.

The completion of these detached portions of the road, has left a gap in the Western Division of only twenty-eight miles to be filled up,

which, it is hoped, will be reduced to eight or ten miles in July next, by an extension of the western end, from Brinton's to near Greensburg. It is confidently expected that the remaining space will be closed during next September, thus completing a continuous rail road from Philadelphia to Pittsburg; from whence there is at present an uninterrupted line to Cleveland and Cincinnati.

Such is the character of the grading between Greensburg and Beatty's—the present western terminus of the road—that it will require our utmost exertions, working night and day at the most difficult points, to effect this object within the time stated. A portion of the grading upon the line lately opened, was also quite heavy, and had to be *forced*, to enable us to reach the southern turnpike by the close of navigation, at an increased outlay, which a few months delay would have materially lessened.

The only serious impediments to an earlier extension of the road from Brinton's to near Greensburg, are sections eighteen and nineteen, which cannot be ready for the rails before June or July. The first was let before the other work in its vicinity, and has been pushed with great energy by the contractors; but its magnitude and difficult character will prevent its completion—even with the expenditure of *much night work*—at an earlier period than stated. The unfinished work on this side of Greensburg is now progressing with as much rapidity as could be expected under the circumstances. To facilitate the completion of the heavy work on section thirty-seven, a tunnel of six hundred feet in length has been substituted for the thorough cut through solid rock (of seventy-five feet in depth,) first proposed. This will probably be the last point to admit the passage of the cars, though section thirty-six may not be finished as early; but a temporary track can be laid over it, if it should become necessary.

That portion of this division between Johnstown's and the stone viaduct, avoiding inclined plane No. 1, of the Portage Rail Road, will not be ready for use before the opening of navigation, when it is expected that plane No. 2, and shortly afterwards plane No. 3, will be avoided at the expense of the Commonwealth, thus leaving but seven of these impediments to rapid transit upon the line of that work—all contained in a space of ten miles. This will enable the business of the Portage Road to be better systematized, and greatly facilitate its operations, reducing the time consumed in its passage to three hours.

The whole of the grading upon the Mountain Division is now under contract, and is progressing with considerable rapidity. The Allegheny Tunnel at Sugar Run summit, which forms the greatest obstacle to the completion of this division, has been commenced at each end and at two of the shafts, making six points of operation. The progress made at the shafts and at the approaches, has not been as great as anticipated, in consequence of the great flow of water encountered; which has caused for the present, the abandonment of

the third shaft. The contractors still feel confident, that they will be able to permit the passage of trains through it during the summer of 1853. But I cannot anticipate so early a termination of our labors at this difficult and uncertain job, though it can scarcely throw us into the use of the Portage for a third winter. The material to be removed is for the most part easily excavated, but a considerable portion of it, probably one-third, will require arching, which will add materially to its cost. The unreliable character of the excavation exposed in opening the eastern approach to the tunnel, induced me to increase the gradient upon the eastern slope of the mountain from ninety-two to ninety-five feet per mile on straight lines, and eighty-two upon curves of minimum radii. This arrangement reduces the length of the tunnel to three thousand and five hundred and seventy feet, and the maximum gradient to nine and three-fourths miles in length, commencing about one and a half miles west of Altoona, and extending to the east end of the tunnel; overcoming in that distance a rise of eight hundred and ninety-six feet, equal to an average of ninety-one and six-tenths feet per mile. By continuing the maximum gradient of the *Western* Division through the tunnel, we obtain the incidental advantage, if it should at a future period become desirable to avail ourselves of it, of overcoming the mountain by a single inclined plane, worked by stationary power, to be used by freight trains, instead of assistant locomotives, upon the steep gradient. This arrangement would make the maximum locomotive gradient west of Altoona fifty-two and eight-tenths feet per mile on straight lines. Below that point, it has been before stated, that the steepest ascent against the heavy trade is but ten and a half feet per mile. Our high gradient is, however, twenty-one feet per mile less, and five and one-fourth miles shorter than the similar ascent of the Allegheny mountain on the Baltimore and Ohio Rail Road. Upon which road the descent upon the west side of this barrier is at the same inclination as the ascent; while ours does not exceed fifty-two and eight-tenths feet per mile. In addition to the Allegheny mountain, the Baltimore route passes Laurel hill,—which we avoid,—by a gradient on each side, of one hundred and five feet per mile.

The difference in elevation overcome at the summit of the Alleghenies, by each route, is four hundred and forty-four feet; theirs being two thousand six hundred and twenty feet above tide, and that of the Pennsylvania Rail Road two thousand one hundred and seventy-six feet. These facts are not presented with a view of disparaging that important work. There is sufficient business for both roads; but to show that we have a line which can, under judicious management, successfully compete with our Southern rivals; while for the trade of the valley of the Ohio, our Northern competitor, in consequence of its greater length, and *large* investment of capital, cannot meet us upon equal terms.

Owing to the difficulty of procuring mechanics during the year, in consequence of the demand for them on the west side of the mountain, we have not been able to remove much of the temporary work erected on the Eastern Division for the purpose of bringing it into early use. The only structure completed, is a stone bridge at Glasco's over the little Juniatta. The remainder of the work will meet early attention next spring.

The following revised estimate of the cost of the whole road has been made with great care, and it is believed that it will be found sufficient to meet the demands for the work specified. The Mountain Division, to be graded throughout for a double track, and a single track laid.

The remainder of the road is graded upon the principles stated in my first report.

To make available the Western Division of the road, we had to build a connexion between it and the Portage, crossing the Cone-maugh two miles above Johnstown, and also turnpike the road from Beatty's to the Southern pike, items not heretofore included in the estimate.



## ESTIMATE OF COST OF WHOLE ROAD.

| DIVISIONS.                                                                                            | NAME OF ACCOUNT.                                             | Last Estimate. | Present Estimate | Amount Paid. | Total Estimated Cost of Road. |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------|------------------|--------------|-------------------------------|
| Eastern Division, including Hollidaysburg Branch.                                                     | Graduation and Superstruction, . . . . .                     | 3,660,000 00   | 3,000,000 00     | 3,567,099 90 |                               |
|                                                                                                       | Engineering Account, . . . . .                               | 145,000 00     | 145,000 00       | 140,719 15   |                               |
|                                                                                                       | Damages and Real Estate, . . . . .                           | 215,000 00     | 245,000 00       | 227,888 01   |                               |
|                                                                                                       | Totals,                                                      | 4,020,000 00   | 4,050,000 00     | 3,935,707 00 | 4,050,000 00                  |
| Mountain Division, Altoona to Stone Viaduct, on Portage R. R.                                         | Graduation and Superstruction, . . . . .                     | 1,845,000 00   | 2,020,000 00     | 105,000 00   |                               |
|                                                                                                       | Engineering, . . . . .                                       | 45,000 00      | 45,000 00        | 11,000 00    |                               |
|                                                                                                       | Damages, &c., . . . . .                                      | 35,000 00      | 35,000 00        | 15,000 00    |                               |
|                                                                                                       | Totals,                                                      | 1,925,000 00   | 2,100,000 00     | 131,000 00   | 2,100,000 00                  |
| Western Division, including Blairsville Branch.                                                       | Graduation and Superstruction, . . . . .                     | 2,915,000 00   | 3,175,000 00     | 2,550,029 96 |                               |
|                                                                                                       | Engineering, . . . . .                                       | 115,000 00     | 115,000 00       | 95,703 88    |                               |
|                                                                                                       | Damages and Real Estate, . . . . .                           | 95,000 00      | 110,000 00       | 89,338 34    |                               |
|                                                                                                       | Totals,                                                      | 3,125,000 00   | 3,400,000 00     | 2,735,072 18 | 3,400,000 00                  |
| <b>Total Cost of Road.</b>                                                                            |                                                              |                |                  |              |                               |
| Outfit for all the Divisions, required as soon as the Mountain Division is completed, and previously. | Workmen's Houses, . . . . .                                  |                | 40,000 00        | 9,485 17     | Outfit required this year.    |
|                                                                                                       | Machine and Engine Houses, . . . . .                         |                | 125,000 00       | 61,817 17    |                               |
|                                                                                                       | Station Warehouses, . . . . .                                |                | 235,000 00       | 90,697 12    |                               |
|                                                                                                       | Road Cars, . . . . .                                         |                | 25,000 00        | 12,050 68    |                               |
|                                                                                                       | Passenger Cars, . . . . .                                    |                | 160,000 00       | 63,321 77    |                               |
|                                                                                                       | Freight Cars, . . . . .                                      |                | 725,000 00       | 230,436 95   |                               |
|                                                                                                       | Locomotives, . . . . .                                       |                | 580,000 00       | 182,410 48   |                               |
|                                                                                                       | Shop Machinery, . . . . .                                    |                | 65,000 00        | 18,679 04    |                               |
|                                                                                                       | West Philadelphia Shops and Sidelings, &c., . . . . .        |                | 35,000 00        | 18,429 88    |                               |
|                                                                                                       | Shops and Sheds on Harrisburg and Lancaster R. R., . . . . . |                | 10,000 00        | 8,748 39     |                               |
|                                                                                                       | Totals,                                                      |                | 2,000,000 00     | 636,076 65   |                               |
|                                                                                                       | Amount, . . . . .                                            |                |                  |              | 1,400,000 00                  |
|                                                                                                       | Interest Account, . . . . .                                  |                |                  |              | 10,950,000 00                 |
|                                                                                                       |                                                              |                |                  |              | 450,000 00                    |
| Total cost of single track and outfit, . . . . .                                                      |                                                              |                |                  |              | 11,400,000 00                 |
| Additional Machinery required as soon as the Mountain Division is opened, . . . . .                   |                                                              |                |                  |              | 600,000 00                    |
| Total, . . . . .                                                                                      |                                                              |                |                  |              | 12,000,000 00                 |

The estimate of the cost of the Eastern Division remains the same as heretofore reported, except in the item of damages and real estate, which has been increased \$30,000, to meet payments already made and those yet to be met.

The estimate of the Mountain Division has been raised \$125,000, caused chiefly by large savings in curvature and something in distance. A preliminary location having been previously made of this portion of the road, only.

But upon the Western Division it has been necessary to increase the estimate of the grading \$270,000. This has been occasioned partly by the necessity of *forcing* a portion of the work faster than it could be economically executed, a course which was fully justified by the importance of the object to be secured. The additional cost, however, is mostly to be attributed to the unexpectedly difficult character of the rock encountered, and the impossibility in many cases of obtaining *embankment* without resorting to this *material* for their construction.

This estimate of the Western Division has been made since the character of the work has been fully developed, and will doubtless prove sufficient, unless it should be deemed important to *force* the remaining *heavy work* more rapidly than has been contemplated, in order to secure its completion within the time stated.

I have included in the foregoing estimate, the amounts that will be necessary to expend for the passenger and freight station at Pittsburg, except the cost of the depot lots, but have omitted those for Philadelphia. If these should be placed west of the Schuylkill river, it would be prudent to erect at present only temporary buildings, for the purpose of demonstrating the suitability of the location for the transaction of the general freighting and passenger business of the Company. These would cost from \$15,000 to \$20,000, and when abandoned would be worth thirty per cent. of this sum for the old materials.

The question of a proper location of our depots at Philadelphia, is one of much importance, and should meet the early attention of the Board. I feel satisfied that our passenger station, at least for the trains passing over our own road, should be placed at a point from whence the locomotives could convey the cars directly upon their destination. Under present circumstances, this can only be accomplished west of this river. Even here, the best point upon the property possessed by the Company, will be influenced by the construction of other bridges across this stream, and hence,—if it should be determined that this is the true place for the station,—it becomes a matter of prudence to omit the erection of permanent buildings, until their exact location can be decided upon understandingly.

To widen the grading where it has been prepared for a single, and lay down a double track from Harrisburg to Pittsburg, will require an additional expenditure of three millions six hundred thousand dollars. It has been proposed to lay down a double track upon



that portion of the road crossing the mountain, at once ; which if undertaken, should be extended to Huntingdon or Petersburg, to afford a point for the transshipment of heavy freight that may be conveyed in the return cars, carrying the large amount of iron, now sent from the little Juniata to Pittsburg. Such a connection with the canal, will also relieve the carrying department of freights not requiring dispatch—during seasons of pressure upon its means of transportation—to be conveyed thence by the Tide Water Canal, or the Union (if that work should be enlarged throughout,) to the city.

The difference in the length of the State improvements, and our own road between Pittsburg and Huntingdon, is thirty-six miles ; this will be increased to about forty-four miles, if the new road commenced by the Commonwealth, to avoid the Portage planes, should be built. This difference, united with a saving of one transshipment, is sufficient under any *reduction of tolls* that may be fixed by the Canal Commissioners for the purpose of *revenue*, to transfer to this part of our line at least, all the heavy as well as light through freights.

To complete a double track road upon this portion of the line, say twenty-seven miles east, and thirty-seven west from Altoona, will require an expenditure beyond the foregoing estimate for a single road, of about eight hundred and fifty thousand dollars. The advantages insured by such an expenditure, in the increased regularity of the trains, and ability to enlarge our business, will greatly exceed the interest upon this sum ; and it is therefore recommended, as soon as the means of the Company will admit of their application to that object.

I took occasion, in my last annual report, to submit a few remarks upon the relative position of the State improvements and those of the Pennsylvania Rail Road Company, with a view of disabusing the public mind as to the supposed rivalry between these works. I then stated, that the true competitors of these improvements were the Baltimore and Ohio, and the New York and Erie Rail Roads, and that the Pennsylvania Rail Road came in to prevent the transfer of business from the Pennsylvania works, to the superior communications referred to. This argument received but little credit, in consequence of the deep-rooted prejudices, in relation to the greater cheapness of canal transportation, which has been deemed sufficient to continue the trade in its present channels, notwithstanding the three transshipments encountered upon the main line. As this delusion still continues, I propose in a few words, accompanied by a statement of facts derived from the experience of other companies, to show that the popular opinion, however correct it might have been when formed, has by the improvements since made in rail road machinery, been rendered erroneous.

The great element that controls the rates of transportation, as well as all other business, is *competition*. Where this does not exist, it should be the duty—as it is the true policy of a corporation

to so arrange its charges, as to produce the largest amount of business, consistently with a due regard to a reasonable profit, upon the capital invested in their work. But should rival improvements be constructed,—which from any cause may offer to convey, either freight or passengers that ought to pass over our route,—at *reduced prices* or *increased speed*, such competition must be met, and any reduction necessary to effect it, levied upon those articles that cannot be diverted from their accustomed channel, and can bear the additional assessment.

The Baltimore and Ohio Rail Road Company have stated in their last annual report, that they intend to place their charge upon light merchandise, at fifty cents per one hundred pounds, between Baltimore and Wheeling, a distance of three hundred and eighty miles. The New York and Erie, and other roads, now carry at equally low rates, and upon the same basis heavy articles will be carried by them at from twenty to thirty cents per one hundred pounds for this distance. The length of the Baltimore and Ohio Rail Road is twenty-six miles greater than our route from *Philadelphia to Pittsburg*, consequently, under the doctrine that I have stated, we cannot charge higher rates than they adopt.

The question then necessarily arises, can transportation be effected upon the State improvements, upon these terms, and afford a net revenue to the Commonwealth, or yield as much to the treasury of the State as though it was carried upon the Pennsylvania Rail Road? If it cannot; then it follows, that but for construction of this road, the whole of the business of the State works, from or beyond Pittsburg, would have ceased to distribute the profits of its transportation through Pennsylvania. To more clearly demonstrate this point, I will submit an estimate of the present cost of carrying goods by the State improvements.

The present reduced maximum charges, including wheel toll, made by the Commonwealth upon through dry goods, &c., is, per one hundred pounds, - - - - - 28 cents.

The State at present receives from the Pennsylvania Rail Road Company, in taxes and tolls for the transportation of like merchandise over the Columbia and Portage Rail Road, and Western Division of the Pennsylvania Canal, *thirty-four cents* per one hundred pounds; showing a *loss at present*, to her treasury, of sixty-eight cents per ton, upon all goods of this class, shipped wholly upon her own works. But if we leave out the Portage Road, and Western Division of the canal; now temporarily used, the revenue upon these articles passing over the Pennsylvania Rail Road at present rate of tolls on the Columbia Rail Road, will be - - - - - 20 cents.

Making the whole reduction that can be made upon them, without destroying the net revenue of the Commonwealth, but - - - - - 8 cents.

|                                                                                                                                  |   |   |   |   |   |   |   |   |           |
|----------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|-----------|
| The lowest charge upon dry goods ever made upon the State works, between Philadelphia and Pittsburg, delivered in seven days, is |   |   |   |   |   |   |   |   |           |
| -                                                                                                                                | - | - | - | - | - | - | - | - | 75 cents. |
| Tolls paid by trausporters,                                                                                                      |   |   |   |   |   |   |   |   | 28 "      |

Leaving their gross profits, - - - 47 cents.  
 only three cents per one hundred pounds less than the whole proposed charge of the Baltimore and Ohio Rail Road Company. Take off the above eight cents, and admit that the transporters could reduce their gross profits twenty per cent., by a reduction of expenses—which is doubtful—we leave the rate by the canal at sixty cents per one hundred pounds, with a difference in time against it, of five days.

At present this difference is but three days, yet it is sufficient to give a large share of this description of goods to the Rail Road, at thirty-three and one-third per cent. higher rates. Supposing that this premium would continue a portion of the business upon the canal, notwithstanding the difference in time of delivery had been increased to five days; the Rail Road charge would have to be placed at eighty cents per one hundred pounds, to admit of it. While the Baltimore and Ohio Rail Road Company, as I have before stated, only purpose charging fifty cents; a difference of thirty cents per one hundred pounds—equal to four times the cost of shipping merchandise from Pittsburg to Wheeling, or up the Monongahela to Fairmount, with the reduced rail road charge from that point.

A similar calculation in relation to heavy goods, will produce equally unfavorable results, and it would seem impossible, if these only are left to the canal, for transporters to carry them at present rates, as their net profits are now almost wholly made upon light merchandise.

It must appear evident to every unprejudiced mind, that will carefully weigh the facts that I have presented, that the construction of the Pennsylvania Rail Road will alone prevent the through transportation from Pittsburg, from floating down the Ohio to Wheeling, or up the Monongahela to Fairmount; which would have left the works of the Commonwealth without this business, and enriched a neighboring State, with the disbursements necessary for the conveyance of her people and produce to and from the sea-board markets.

The three transshipments upon the main line of the State works, is the chief cause of their inferiority as a means of transit to the more modern improvements. The cost of these, on articles of little value, is alone, *twenty-five per cent.* of the whole proposed charge between Wheeling and Baltimore.

In addition to this, it may now be stated as a well ascertained fact, that locomotive steam power on Rail Roads, for the conveyance of freight, is as cheap, if not *cheaper* than horse power on second class canals,—such as those of Pennsylvania,—omitting the element of time. But in this age of steam and electricity, time is too important an element in its effects upon the cost of transporta-

tion, to be overlooked. In consequence of the increased expedition upon rail roads, the passenger traffic, live stock, all valuable merchandise and perishable articles, are necessarily secured to them without competition. Possessing these, to realize a profit from the investment, a rail road doing a large business, can afford to carry heavy articles at the actual cost of transportation. In some instances, it is both politic and profitable—as paradoxical as it may appear—to go below even this standard, while a competing canal is reduced to the necessity of levying the whole of its profits, upon this description of business only. Every merchant is sensible of the practical workings of this principle, in his daily transactions;—and I will take this occasion to remark—that the failure of many public works may be traced to the violation of common business views, in their management, under the supposition that so important and complex a machine as a rail road or canal, must be regulated by principles incomprehensible to the uninitiated.

The erroneous impressions, at present existing in the public mind, in relation to the greater cheapness of canal transportation, under all circumstances, which caused such immense outlays in Pennsylvania upon this kind of improvement, may have been, to a great extent, correct at the periods they were undertaken; but the successful introduction of the great improvement of the age—steam power—upon rail roads, has changed the merits of the question, and has rendered it necessary that some other motive power than horses should be introduced upon canals, to enable them to regain their former superiority. In the valley of the Schuylkill, we have a *first class* canal and rail road, competing for the transportation of heavy freight, with the following results.

|                                                                                                                                                                                            |  |                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------|
| The cost of transporting Coal per ton by Rail Road, from Pottsville to Philadelphia,—omitting repairs of road, general office expenses, and interest on cost of improvement, is, - - - - - |  | 38 $\frac{6}{10}$ cts.             |
| The charge made for <i>boating</i> coal by horse power, on Schuylkill Canal is, per ton - - - - -                                                                                          |  | 60 “                               |
| Making difference in favor of Rail Road, per ton, of                                                                                                                                       |  | <hr/> 21 $\frac{4}{10}$ cts. <hr/> |

The whole cost of transportation, per ton, upon the Reading Rail Road, including the items above omitted, except interest on cost of the improvement, was last year 56 cents, which is less than the boat charges on the canal only. I believe, however, that the advantage possessed by that canal, in its ability to pass its boats direct to New York, and other points upon the river, without transshipment, together with the large increase of business that must take place in this branch of trade, will afford it an annually increasing revenue. This, however, is a fair view of the relative merits of each improvement, worked by the respective motive powers, now used upon them.



The large debt of the Reading Rail Road, caused in a great measure by its former financial embarrassments, has rendered necessary the establishment of higher rates of freight, than its immense business and favorable gradients would seem to justify. The Baltimore and Ohio Rail Road Company at present transport coal, from Cumberland to Baltimore, one hundred and seventy-nine miles,—twice the length of the Reading Road,—over gradients against the trade, at one point rising to eighty-two feet per mile, for \$2 00 per ton; at equal rates per mile, the Reading Rail Road charge should be but \$1 00, while it has *averaged* this year \$1 22½ per ton.

It may be considered that I have passed beyond the legitimate objects of this report, in the foregoing remarks; but I have deemed them necessary to meet a popular error, which has influenced the action of those who, to a considerable extent, control the destinies of this Company, and have heretofore considered this road as a rival to the State works, instead of an improvement, which is *essential* to the *profits* of a portion of them, and necessary to retain the through transportation *within* the borders of the Commonwealth.

The tax-payers of the State cannot view the construction of the Pennsylvania Rail Road with alarm, as it will abstract no transportation of importance from her works, that would not have sought other channels to market; but on the other hand, will return to her treasury an increased revenue from her connecting work, more than will be drawn from the other portions of the main line. The change of business will not be sudden, but must be the work of some years, leaving time for the growth of a local transportation, to sustain the otherwise unproductive portions of the State improvements.

Although rail roads may compete with canals, in the transportation of freights of all kinds, yet they cannot do so successfully with river navigation, adapted to large steamers, uninterrupted by low water. This Company possess the shortest and best communication between the Atlantic and the Ohio River—the great artery of trade, which forms the borders of so many States, and is fringed on either shore by numerous and populous towns, that have been attracted to its side, in consequence of its having been, heretofore, the only available outlet to market, for the products of a large portion of nearly one-half of the States of this Union.

Should this river be improved, so as to secure this object,—which it is entirely practicable to accomplish,—its pre-eminence will be maintained, and the cities created by its influence, will continue to increase and prosper; but if left to the uncertain navigation that now exists, a large share of the trade, that is at present attracted to them by the comparatively cheap river transportation, which has been the means of their existence, will find vent over the new outlets, formed by the numerous rail roads now being constructed towards the Atlantic.

To none does the importance of this subject present stronger

claims upon their attention, than the citizens of Pittsburg and Philadelphia, and the Stockholders of the Pennsylvania Rail Road. With such an improvement of this river as is contemplated, the former city will be made the depot of this great and fertile valley, from whence the shortest, cheapest and best route to the seaboard will be made. There is no authority that can accomplish this object, except that of the general government. A concert of action among all the States interested, and an equitable distribution of the burthens which it might entail upon each, would be impossible. The object, however, is too important to be permitted to slumber, and it should be earnestly pressed upon the attention of the councils of the Union, who, it has been admitted by the strictest political sect, possess the constitutional power to undertake the enterprise.

The improvement of this river, as well as the construction of our own rail road, seems to be as fully entitled to the consideration of Congress, from their effects upon the value of the public lands, as those roads that have received such munificent bequest from the common property of all the States.

The effects of these favored works are, doubtless, greater in their local influences, and hence more appreciable; but they cannot increase, to the same extent, the value of the whole public domain. The very plausible arguments, therefore, that have justified these local appropriations of lands, have no equitable foundation.

I am not prepared to state what would be the best means of improving this river. Mr. Ellet, a distinguished civil engineer, has presented to the public, a plan which is novel, and if facilities are afforded by the topography of the country, for the construction of reservoirs such as he has proposed, at a reasonable cost, it may, with some modification, prove to be the best. Its merits are certainly worthy of a full and careful examination; and if adopted, and successfully carried into effect, our country will have the honor of introducing a new system of river engineering, which must prove of incalculable advantage to the world.

In closing this report, it gives me pleasure to repeat my obligations to Edward Miller, Esq., Associate Engineer, and his principal assistants, Messrs. G. W. Leuffer, O. W. Barnes, Thomas-Seabrook, and T. H. Dupuy, for their untiring efforts in pressing forward that portion of the work committed to their supervision. Also to Strickland Kneass, Principal Assistant Engineer, who has had charge, under my immediate direction, of the grading upon the eastern slope of the mountain, and the erection of the shops and engine houses at Altoona, which will be in readiness for use during the ensuing Spring.

All of which is respectfully submitted by

Your obedient servant,

J. EDGAR THOMSON,

*Chief Engineer.*

## TABLE

*Showing the Distances from Harrisburg, and the Elevations above Tide, of the main points on the Line of the Pennsylvania Rail Road.*

|                                 |   |   |   | DISTANCES<br>from<br>HARRISBURG. | ELEVATION<br>above<br>TIDE. |
|---------------------------------|---|---|---|----------------------------------|-----------------------------|
| Harrisburg, -                   | - | - | - | 0.0                              | 310                         |
| Cove, -                         | - | - | - | 10.4                             | 334                         |
| Duncannon, -                    | - | - | - | 14.4                             | 345                         |
| Bailey's -                      | - | - | - | 22.6                             | 375                         |
| Newport, -                      | - | - | - | 27.3                             | 383                         |
| Millerstown, -                  | - | - | - | 32.6                             | 396                         |
| Tuscarora, -                    | - | - | - | 37.7                             | 408                         |
| Mexico, -                       | - | - | - | 44.0                             | 422                         |
| Perrysville, -                  | - | - | - | 46.1                             | 430                         |
| Mifflin, -                      | - | - | - | 48.7                             | 429                         |
| Lewistown, -                    | - | - | - | 60.6                             | 488                         |
| Anderson, -                     | - | - | - | 67.8                             | 488                         |
| McVeytown, -                    | - | - | - | 72.5                             | 510                         |
| N. Hamilton, -                  | - | - | - | 82.5                             | 586                         |
| Mount Union, -                  | - | - | - | 85.5                             | 585                         |
| Mapleton, -                     | - | - | - | 88.8                             | 581                         |
| Mill Creek, -                   | - | - | - | 92.1                             | 590                         |
| Huntingdon, -                   | - | - | - | 97.1                             | 610                         |
| Petersburg, -                   | - | - | - | 103.5                            | 663                         |
| Barre Forge, -                  | - | - | - | 106.8                            | 714                         |
| Tunnel, -                       | - | - | - | 108.5                            | 748                         |
| Spruce Creek, -                 | - | - | - | 109.4                            | 766                         |
| Union Furnace, -                | - | - | - | 111.1                            | 789                         |
| Birmingham, -                   | - | - | - | 114.3                            | 857                         |
| Tyrone, -                       | - | - | - | 116.3                            | 886                         |
| Tyrone City, -                  | - | - | - | 116.6                            | 892                         |
| Tipton's Run, -                 | - | - | - | 120.9                            | 983                         |
| Fostoria, -                     | - | - | - | 123.0                            | 1021                        |
| Bell's Mills, -                 | - | - | - | 124.5                            | 1049                        |
| Blair Furnace, -                | - | - | - | 128.0                            | 1100                        |
| Intersection of Branch and Main |   |   |   |                                  |                             |
| Line, -                         | - | - | - | 131.0                            | 1155                        |
| Altoona, -                      | - | - | - | 131.1                            | 1168                        |
| Kittaning Point, -              | - | - | - | 137.0                            | 1623                        |
| West end Allegheny Mountain     |   |   |   |                                  |                             |
| Tunnel, -                       | - | - | - | 143.1                            | 2161                        |
| Clearfield Ridge, -             | - | - | - | 144.5                            | 2114                        |
| Northern Turnpike, -            | - | - | - | 146.3                            | 2022                        |
| Cresson, -                      | - | - | - | 147.1                            | 1996                        |

[tain.  
Summit of Moun-

|                                  | DISTANCES<br>from<br>HARRISBURG. | ELEVATION<br>above<br>T I D E. |                    |
|----------------------------------|----------------------------------|--------------------------------|--------------------|
| Opposite foot of Plane No. 4,    | 149.2                            | 1891                           | Portage Rail Road. |
| Crossing Plane No. 3, - -        | 151.1                            | 1797                           | do                 |
| Opposite Jefferson, - -          | 156.2                            | 1561                           | do                 |
| Pringle's Point Summit, -        | 158.1                            | 1570                           |                    |
| Summerhill, - -                  | 158.8                            | 1559                           |                    |
| Big Viaduct, A. P. R. R., -      | 162.2                            | 1458                           |                    |
| Conemaugh Station, - -           | 167.7                            | 1226                           |                    |
| Johnstown Passenger Station,     | 169.9                            | 1184                           |                    |
| Magill's Conemaugh Furnace,      | 177.5                            | 1136                           |                    |
| Nineveh Water Station, -         | 179.5                            | 1121                           |                    |
| New Florence, - -                | 183.7                            | 1074                           |                    |
| Lockport Station, - -            | 188.1                            | 1054                           |                    |
| Bolivar, - -                     | 189.9                            | 1032                           |                    |
| Blairsville Branch, - -          | 194.8                            | 1117                           |                    |
| Hill Side Water Station, -       | 198.8                            | 1129                           |                    |
| Rhey's Mill, Summit of Grade,    | 200.6                            | 1162                           |                    |
| Derry Station, Mossholder's, -   | 202.3                            | 1174                           |                    |
| Sindorff's Summit, - -           | 202.8                            | 1186                           |                    |
| St. Clair, - -                   | 204.8                            | 1085                           |                    |
| Latrobe, east end of Level       |                                  |                                |                    |
| Grade, - -                       | 207.5                            | 1004                           |                    |
| Loyalhanna River, (grade,) -     | 207.6                            | 1004                           |                    |
| Beatty's Station, - -            | 209.8                            | 1073                           |                    |
| Rodger's Summit, - -             | 212.6                            | 1213                           |                    |
| Greatest depression crossing     |                                  |                                |                    |
| Crab Tree, - -                   | 213.3                            | 1176                           |                    |
| George's Summit, - -             | 213.9                            | 1200                           |                    |
| Greatest depression crossing     |                                  |                                |                    |
| Seewickly, - -                   | 216.5                            | 1062                           |                    |
| Greensburg Passenger Sta-        |                                  |                                |                    |
| tion, - -                        | 217.1                            | 1091                           |                    |
| Barelay's Summit, - -            | 218.7                            | 1171                           |                    |
| Painter's Mill, Manor Station,   | 224.6                            | 934                            |                    |
| Tinker Run Station, Irvin's, -   | 226.6                            | 884                            |                    |
| Stewart's, near mouth of Brush   |                                  |                                |                    |
| Creek, - -                       | 231.3                            | 792                            |                    |
| Turnpike crossing Turtle Creek,  | 235.4                            | 750                            |                    |
| Turtle Creek Station, Brinton's, | 236.5                            | 757                            |                    |
| Braddock's Field, Mansion        |                                  |                                |                    |
| House, - -                       | 238.0                            | 826                            |                    |
| Wilkinsburg Passenger Station,   | 241.3                            | 922                            |                    |
| East Liberty, head of Steep      |                                  |                                |                    |
| Grade, - -                       | 243.6                            | 917                            |                    |
| Canal Bridge, Pittsburg, -       | 248.2                            | 748                            |                    |
| Elevation of extreme low wa-     |                                  |                                |                    |
| ter, - -                         |                                  | 700                            |                    |



# REPORT

OF

## THE GENERAL SUPERINTENDENT.

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General Transportation Office, Penn. R. R. Co.,  
Harrisburg, January 1, 1852.

To the President and Directors of the  
Pennsylvania Rail Road Company.

GENTLEMEN:—The commencement of the last fiscal year, found the Pennsylvania Rail Road in operation as far as the western termination of the Eastern Division of the Pennsylvania Rail Road, with a connection with the Allegheny Portage Rail Road, near Hollidaysburg; since that time, portions of the Western Division have been brought into operation, and transportation between Philadelphia and Pittsburg is now conducted over several separate links, forming a broken, and to some extent, unsatisfactory chain of communication between the two extreme termini of the line.

The first, or eastern portion of the route, is formed by that part of the Philadelphia and Columbia Rail Road which lies east of Dillerville; the length of which is seventy-one miles. This improvement is owned and operated by the Commonwealth of Pennsylvania, and is controlled and managed by the Board of Canal Commissioners, and officers appointed by them. The State furnishes motive power, but participates in no other way, in the conduct of transportation upon the road, which is open to the free use of individual transporters.

The Lancaster and Harrisburg Rail Road, from its intersection with the Columbia Rail Road, at Dillerville, is thirty-six miles in length, and is operated by the Pennsylvania Rail Road Company,

under a contract with the Company owning the road. The Pennsylvania Rail Road Company furnish all the motive power, and the cars used in their own business, but do not attend to the repairs of track or bridges.

The Eastern Division of the Pennsylvania Rail Road extends from Harrisburg to Altoona, a distance of one hundred and thirty-two miles, from which a branch of six miles connects it temporarily with the Allegheny Portage Rail Road, at a point about one and a quarter miles west of Hollidaysburg.

The Portage Rail Road is owned by the Commonwealth of Pennsylvania, and forms part of the main line of rail road and canal connecting the Cities of Philadelphia and Pittsburg; its length from the intersection with the Pennsylvania Rail Road is thirty-four miles, and the ascent and descent of the mountain are each effected by five inclined planes. Two miles east of Johnstown, a connection was made on the 25th of August, 1851, with the Portage Rail Road, and twenty miles of the Western Division of the Pennsylvania Rail Road, extending to Lockport, was brought into use.

Until the recent extension to the Greensburg pike, the transshipment of passengers and freight was effected at Lockport, where a temporary building was erected by the Pennsylvania Rail Road Company to afford shelter to passengers: and a substantial brick warehouse was built by J. Covode, Esq., Agent of the Company, to accommodate the freight transportation, which, until the completion of the road to Pittsburg, must continue to be transhipped at this place during the season of canal navigation.

On the 10th of December, the Western Division of the road was extended to Beatty's station, two miles west of the new town of Latrobe, within one and three-quarter miles of the Southern or Greensburg turnpike, and to a distance of forty-two miles west of the intersection with the Portage Rail Road, near Johnstown. At the same time eleven miles of road between Pittsburg and Turtle creek were opened for travel; the intermediate portion of twenty-seven miles is at present operated by stage and wagon lines, but it is expected that in the month of September next, the whole of the Western Division will be completed, thus securing a continuous line of railway from Philadelphia to the Ohio river, over which cars can pass without transshipment. When this is accomplished, Philadelphia may expect to realize some of the substantial advantages which must result from the construction of her great work.

#### THE COLUMBIA AND PHILADELPHIA RAIL ROAD

Is improving rapidly; although there were defects in the original location, yet the line is susceptible of great improvement by partial changes that will soon be completed. Arrangements have been made to relay the north track with heavy rail, and finally to recon-

struct the whole superstructure; the completion of which improvement will materially lessen the risk of transportation, add to the speed attainable with safety by passenger trains, and increase the proportion of paying over dead weight, by permitting, without additional risk, a great increase in the loading of the cars.

#### LANCASTER AND HARRISBURG RAIL ROAD.

This road has been completely relaid with heavy T rail, and the Company have contracted for raising the track and ballasting the whole road. It is also proposed to alter the grades between Harrisburg and Middletown to conform to those of the Pennsylvania Rail Road. These improvements will make it a first class road, will save expense in the repair department of the Company owning it, and greatly reduce the risk of accident to the party by whom it is operated.

#### PENNSYLVANIA RAIL ROAD.

The business of the Pennsylvania Rail Road is divided into four general departments, viz: Maintenance of Way, Conducting Transportation, Motive Power, and Maintenance of Cars, as was fully explained in the last annual report. This division is both convenient and natural, and gives entire satisfaction in practice.

#### MAINTENANCE OF WAY, OR ROAD DEPARTMENT.

The road, during the past year, has continued in very perfect condition, and has been kept in repair without much expense; three men to five miles being the regular allowance, with the addition of floating gangs, for extraordinary repairs and new work. The bridges are built in the most substantial manner; they have been protected by several coats of fire-proof paint, and are covered with metallic or other incombustible roofing; notwithstanding this precaution, a temporary bridge of more than one thousand feet has been framed and housed, to be immediately thrown across the river in the event of the loss of any of the bridges on the line. The Eastern Division of the road is under the charge of George R. Mowry, Esqr., as resident Engineer. George W. Leuffler, Esqr., has the supervision of the Western Division from Johnstown to the terminus at Beatty's.

#### CONDUCTING TRANSPORTATION.

The immediate charge of the running of the trains has been intrusted to Herman J. Lombaert, Esqr., a gentleman, who by his long experience as resident Engineer on one of the best managed

roads of New England, has brought with him an amount of professional and practical experience, which renders his services of great value. To this cause must be attributed the regularity and precision which have, until recently, been observed in the conduct of the transportation upon the road.

It has been our uniform practice to anticipate, and as much as possible, to guard against the usual accidents and delays to which rail road transportation is subject. By an investigation of the causes of accidents which occur either on our own or on other roads, the means of avoiding them will generally be suggested; and nothing has been omitted that a cautious vigilance could anticipate or provide, to free the operations of the line as much as possible from vexatious detentions, or add to the safety and comfort of passengers. Previous to the commencement of winter, the engines were provided with all the contrivances which experience has shown to be useful to guard against the effect of snow or severe cold; they have not in any instance been frozen while in use, nor have the trains on the Pennsylvania Rail Road been as seriously detained by snows as have those on other roads; notwithstanding this, irregularities have occurred from circumstances beyond our control, which will not appear singular, when it is known that any delay to a passenger train upon any of the portions of the route with which we are in connection is necessarily extended throughout the entire extent of the single track line; and this difficulty, sufficiently serious in itself, is greatly aggravated by the fact, that our express passenger trains pass over the road in both directions at night, when the telegraph line is not in operation, and when no information can be obtained of the relative positions of trains running in constant expectation of meeting. That collisions under these circumstances have not occurred, is a very conclusive evidence of the care which has been exercised, and reflects much credit upon the officers of the trains, whose duties during the present severe winter have been arduous in the extreme.

#### MOTIVE POWER.

Considerable difficulty has been experienced in the management of this department, arising from the fact that the successive extensions of the road were necessarily made in advance of the building, fixtures, and machinery required for its economical and satisfactory operation. The engines for nearly the whole of the Eastern Division of the Pennsylvania Rail Road, including the Lancaster and branch roads, nearly two hundred miles, are maintained in running order at the Harrisburg shop; the capacity of which has been but slightly increased since its duty was confined to the Lancaster Rail Road, of thirty-six miles.

The shop buildings at Mifflin are now complete, and a change in the motive power arrangements would be practicable were it not



that dwellings for the operatives cannot be obtained at this time. A still more serious difficulty from the same cause will exist at Altoona, where no accommodations have been provided for the numerous employees of the Company, whose services will soon be required at this point.

It has been considered inexpedient to divert the funds of the Company from the legitimate object of their appropriation, in the construction and equipment of the road, but it may not be improper to contribute a small amount to an object of such prominent and essential importance as the erection of dwellings at Altoona. To relieve the Company of this expense, I formed a joint stock association, and procured subscription to a sufficient amount to erect thirty-two dwellings, to which I was myself a large contributor, but circumstances having led to my resignation as General Superintendent, confidence in the investment has been impaired, and the work suspended. It remains, therefore, for the Company to make some other arrangement, either by a subscription to the stock of the association, or in any other way that may be considered least objectionable.

For the number of engines, their operation and expenses, you are respectfully referred to accompanying tables.

#### MAINTENANCE OF CARS.

Our experience thus far has demonstrated the fact, that cars can be built cheaper and better by the Company, than by contract. The location at Altoona, from the abundance of coal, iron and lumber that are produced in its vicinity, is peculiarly eligible, and it will be to the interest of the Company to concentrate the work as much as possible at this point. Ordinary repairs to cars can be most conveniently made when they are empty, and consequently repair shops are required at Philadelphia and Pittsburg.

The shop at West Philadelphia is now in operation; that at Pittsburg will be required as soon as the Western Division is completed.

#### FUEL.

|                                                    |             |
|----------------------------------------------------|-------------|
| The whole number of miles run by engines, has been | 477,585     |
| The whole number of cords of wood consumed,        | 20,463      |
| The cost of the wood consumed, including labor,    | \$43,971 95 |
| The whole number of bushels of coal consumed,      | - 8,029     |
| The cost of coal consumed, - - - - -               | \$571 85    |
| The cost of fuel per 100 miles run, - - - - -      | \$9 33      |

To determine the most economical kind of fuel, and that which, all things considered, would afford the greatest practical advantages in its use upon the road, I directed careful observations and experiments to be made from time to time upon wood, coke, Pittsburg

and Allegheny coals; some of the results of which, as reported by Enoch Lewis, Esq., under whose supervision the experiments were made, are as follow :

*First Experiment.*

|                                               |                 |
|-----------------------------------------------|-----------------|
| With wood alone, the "Clearfield" engine made | 22 trips.       |
| Average number of cars per trip, - - -        | 13              |
| Number of miles run, - - -                    | 522             |
| Number of cords of wood burned, - - -         | 14 78-100       |
| Equal, per 100 miles run, to - - -            | 2 83-100 cords. |

*Second Experiment.*

|                                         |                         |
|-----------------------------------------|-------------------------|
| With wood and Allegheny coal mixed, the |                         |
| "Clearfield" made - - -                 | 26 trips.               |
| Average number of cars per trip - -     | 11½                     |
| Number of miles run - - -               | 590                     |
| Number of cords of wood burned - -      | 11 15-100               |
| Number of bushels of coal burned - -    | 63                      |
| Equal, per 100 miles run, to - - -      | 1 98-100 cords wood.    |
| Equal, per 100 miles run, to - - -      | 10 68-100 bushels coal. |

By comparing the second experiment with the first, it appears that the practical effect of the combustion of one cord of wood was equivalent to that of 11½ bushels of Allegheny coal, or one ton of coal would be equivalent to 2½ cords of wood.

Another series of similar experiments gave the result, one cord of wood equivalent to 11½ bushels of Allegheny coal. The experiments with wood, and with wood and Allegheny coal, were made on the road between Johnstown and Lockport. The greatest possible proportion of coal was used—its effect, when employed too freely, was to run down to the bottom of the fire box, producing intense heat on the grate bars and melting them. Experiments were also made with Pittsburg coal, but not under such circumstances that much reliance can be placed on the results. It was ascertained, however, that this variety burns much more freely than Allegheny coal, is fully consumed, and falls to ashes, leaving no slag or foreign matter upon the grate: it also burns more freely, and does not produce such intense heat upon the grate bars.

An experiment was also made with coke from Legonier Valley, but the engineers could not succeed in burning it; after remaining in the fire-box twelve hours, when taken out and cooled, it was apparently in the same condition as when it was first thrown in—it appeared to be much intermixed with earthy matter.

Taking the experiment upon which most reliance can be placed, it appears that the use of coal with wood, effects a saving of about thirty-three per cent. of the wood consumed by the substitution of a cheaper article.

Assuming the average cost of wood delivered on the tender to be \$2 75, including labor and waste, and the cost of coal to be four cents per bushel, the saving per one hundred miles will be \$2 30, or twenty-eight per cent. of the whole cost of fuel.

Notwithstanding the value of this result, it is confidently believed that experiments with the coals found along the line of the road west of the Allegheny mountains, will give results still more satisfactory, and that they will be found to be of such a quality that a larger proportion of coal can be employed.

#### COMPARISON OF WEIGHT OF FUEL.

|                                                  |   |   |   |   |   |               |
|--------------------------------------------------|---|---|---|---|---|---------------|
| A ton of coal weighs                             | - | - | - | - | - | 2,240 pounds. |
| Its equivalent, or two and a half cords of wood, |   |   |   |   |   | 10,000 do     |
| Difference,                                      |   |   |   |   |   | <hr/> 7,760   |

If, then, a given weight of wood would carry a train to a certain distance, an equal weight of coal would carry it about four and a half times as far, provided coal could be used by itself; but as the quantity of coal that can be used, is not greater than that of which the useful effect is thirty-three per cent. of the wood, it will be found that the practical distance which an engine can run without renewing the supply of fuel, will be increased by the use of a proper proportion of coal, thirty per cent., that is, if an engine using wood alone, can run twenty miles without stopping for a fresh supply, an engine using wood and coal in proper proportion, can travel, under similar circumstances, twenty-six miles.

#### PROSPECTIVE REVENUE.

The extension of the Pennsylvania Rail Road to the Ohio river, will be several months in advance of the Baltimore and Ohio Rail Road. At this time there will be rail road connections to Cleveland and Cincinnati. The former, by a very direct route, taps the stream of trade which flows along the lakes at a point west of Erie, Dunkirk or Buffalo, and must divert a very considerable portion via. the Pennsylvania Rail Road to Philadelphia, Baltimore and New York, to each of which cities this road offers the shortest, and with satisfactory connections with other lines, the quickest and best route.

The Baltimore and Ohio Rail Road when completed to Parkersburg, with direct connections extending to Cincinnati, will prove a powerful competitor for that portion of the trade which leaves the river at this point; but even here, Philadelphia will have at least equal advantages, and all that continues beyond Cincinnati, as well as the rail road business from the numerous lines concentrating in the State of Ohio, and the immense trade of the lakes will probably

seek an eastern market over the Pennsylvania Rail Road. The lake trade alone is estimated at \$200,000,000 per annum. From all these sources it is not unreasonable to suppose that the amount of business will in a few years exceed the capacity of our road even with a double track. If the business of the Erie Canal is estimated as equal to that of six first class rail roads with double track, taxed to their utmost capacity, can it be doubted that the Pennsylvania Rail Road will find abundant employment? The local business along the line of the road, although increasing, does not develop itself so rapidly as could be desired, the competition of the Pennsylvania Canal, and the high rates of toll which a connection with the State works renders it necessary to maintain, have served to retard the developments of this trade. I have not considered it expedient, in the present condition of the road, for the Company to carry at rates which are not remunerative, and have objected to any arrangement with the State which does not recognize the principle that the Pennsylvania Rail Road is entitled for road and motive power, to at least as much per mile as the State road; that we are entitled to more, can be made apparent, but it is not expedient to extend this report, already too long, by a consideration of this subject; the principle was fully admitted in the article of agreement between the Boston and Worcester and Western Rail Road corporations, for a copy of which I am indebted to William Parker, Esq., formerly Superintendent of the Boston and Worcester Rail Road.

The last report both of the General Superintendent and of the Superintendent of transportation, entered so fully into a consideration of the subject of tolls on Juniata freight, that no allusion to it is required. A reduction has been made by the Canal Commissioners since the publication of that report, but further action is necessary before any very considerable change can be made in our rate of tolls. The most important local business of the road, promises to be in the article of lumber, one train of which will yield a net profit as great as can be realized from three trains of coal at the rates at which both articles must be carried. From Tyrone to Bell's Mills, a distance of about ten miles, the line of the Pennsylvania Rail Road runs parallel to the main ridge of the Allegheny mountains, and within about ten miles of the vast timber region of Clearfield and adjacent counties, which lie on the small tributaries of the Susquehanna. The ravines which penetrate the slope of the mountain, afford facilities for the construction of roads connecting this region with the Pennsylvania Rail Road, the most favorable of which are at Bell's Run, Tipton's Run, and Tyrone. At Tyrone the rail road is located on a side hill of considerable inclination, which is unfavorable for an extended lumber business, as the proximity to the track and the danger of fire would be too great. At Bell's mills and Tipton's run, and particularly at the latter point, sidings can be constructed on level ground at right angles to the direction of the road, and extended to any distance that may be



required for the protection of this species of property. New towns will no doubt spring up at both these points: Tyrone city is another new town, which is rapidly increasing, and will derive a large amount of business from the Glen Hope turnpike, the Philipsburg turnpike, and the plank road to Milesburg, at the head of the Bald Eagle navigation.

Latrobe, so called in compliment to the distinguished individual who is at the head of the Engineer department of the Baltimore and Ohio Rail Road, is located on the Loyalhanna, in Westmoreland county; it will no doubt improve rapidly, and be the centre of an important local business.

Altoona, at the eastern base of the Allegheny mountains, must derive its chief prosperity from the location of the shops of the Company: it has no considerable agricultural or mineral resources.

Patterson, opposite the town of Mifflin, on the Juniata, is the last of the new towns which it is necessary to notice: its business will not add much to the revenues of the road for some time.

Plank roads from Tyrone to Milesburg, from Tipton's Run to Mount Pleasant, with numerous branches through Clearfield county; from Hollidaysburg to Bedford, from Johnstown to Sommerset, from Blairsville to Indiana, and from Latrobe, or Greensburg, to Mount Pleasant, in Westmoreland county, constitute the most important feeders for local business now in progress, or about to be constructed. There are at present in operation in Clearfield county, and within distances of from ten to twenty miles of the Pennsylvania Rail Road, about twenty-five mills engaged in the manufacture of lumber. Several others of the largest class are about to be erected. The united product of the mills now in operation, or in process of construction, will be about 75,000 feet daily: there cannot be a reasonable doubt that the quantity may be doubled in a short time. The encouragement given to the trade by the reduction of toll, has been such that parties located on Clearfield creek, and possessing the advantage of water communication with the Susquehanna, are making arrangements to haul their best lumber over common roads, a distance of twenty-five miles, to the rail road, in preference to sending by water.

As timber lands lying within this distance of the rail road are increasing in value, and new mills are about to be commenced, it is possible that the lumber trade may in time require a daily train, the receipts of which may be estimated as follows:

Twenty-five double cars, carrying 6,000 feet each, at an average of \$5 00 per thousand feet, will pay per day, - - - \$750 00

*Deduct Expenses.*

|                                                                                      |   |   |          |
|--------------------------------------------------------------------------------------|---|---|----------|
| Three engines daily, with fuel, &c.,                                                 | - | - | \$ 60 00 |
| One hundred and fifty cars at \$400 each, allowing car expenses at twenty per cent., | - | - | 40 00    |

|   |                          |          |        |
|---|--------------------------|----------|--------|
| 3 | Amounts carried forward, | \$100 00 | 750 00 |
|---|--------------------------|----------|--------|

|                                               |          |                |
|-----------------------------------------------|----------|----------------|
| Amounts brought forward,                      | \$100 00 | 750 00         |
| Brakemen and Conductors, - - - - -            | 25 00    |                |
| Wear of track, - - - - -                      | 15 00    |                |
| State tolls \$1 per 1,000 feet, - - - - -     | 150 00   |                |
| Lancaster and Harrisburg Rail Road, - - - - - | 60 00    |                |
|                                               | <hr/>    | \$350 00       |
| Net profit per day,                           |          | <hr/> \$400 00 |

Equal to \$120,000 per annum, or three per cent. interest on the whole cost of the Eastern Division of the road and its equipment.

It is evident that this business is of sufficient value to the Company to justify some effort to secure and to increase it to a sufficient extent to require a daily train. In proposing a graduated tariff to admit of the transportation of the inferior qualities of lumber at less than average rates, it is hoped that the self-evident importance of the course will shield from the imputation of private motives, the individual who has ventured to recommend it.

#### COAL.

It will not be to the interest of the Pennsylvania Rail Road Company to encourage a very extensive coal business; the situation of the road is such, in consequence of its position between other roads not under the control of the Company, that its business must necessarily be limited so long as this condition of things continues.

The movements on the road must be governed by the passenger trains, and regularity cannot be obtained except at the frequent sacrifice of connections; any detention to a passenger train on a single track road, necessarily detains all others; but as the freight business at this time is but small, and not more than half sufficient for a single train, I have thought it to the interest of the Company to wait, if necessary, several hours at the termini of the line, rather than subject the through passengers to the loss of a day by laying over on the route. This explanation, while it will account for some apparent irregularities of our trains since the opening to Latrobe, will also furnish a reason why it would not be expedient greatly to increase the number of our trains until a double track is laid. It is very important, however, that we should have a business that could receive attention at the convenience of the Company, and furnish the means of forming full trains, when ordinary freight is not sufficient; in this view, a coal business can be done to great advantage, and for the purpose of securing it, I proposed a rate of toll which I believe has not yet received the favorable attention of the Board.

I learn from Solomon W. Roberts, Esq., Chief Engineer of the Ohio and Pennsylvania Rail Road, that, "On the 6th inst., (Janu-

ary, 1852,) a continuous rail road communication was completed between Pittsburg and Cleveland. The whole distance is one hundred and forty miles; eighty-two miles of which belong to the Ohio and Pennsylvania Rail Road Company, and fifty-eight miles to the Cleveland and Wellsville Rail Road Company.

"The Pennsylvania and Ohio Rail Road can be finished in twelve months, at a cost not exceeding the estimate, if the necessary funds can be procured: the importance, to the Pennsylvania Rail Road Company, of its early completion is too obvious to require comment. It is estimated that the through travel of the Pennsylvania and Ohio Rail Road will be not less than one hundred passengers per day, each way, before May next.

"The Pennsylvania and Ohio Rail Road is now open to Alliance, eighty-two miles. It is expected that it will be completed to Massilon, one hundred and eight miles, in about a month, and to Wooster, one hundred and thirty-three miles, in the spring. On the remaining fifty-three miles the grading and bridging are under contract. When it is considered that this important work was commenced without a dollar in the treasury, the surprising results that have been attained must reflect the highest credit on the energy, skill, and financial ability, which have so eminently distinguished the efforts of its managers."

#### DEPOTS.

The depot arrangements of the Pennsylvania Rail Road Company must, necessarily, be made to conform to the character of its business operations. To determine what these arrangements should be, it is necessary to inquire into what branches the trade will probably be divided.

At the city of Pittsburg, three divisions naturally present themselves; these are,—

1. The trade of the Ohio river, which requires transshipment at the river bank.

2. The rail road business of the west, which requires a connection between the depots of the Pennsylvania and Ohio Rail Road and the Pennsylvania Rail Road, with the least possible inconvenience and expense.

3. The local trade of the city of Pittsburg itself, which requires a central location for its proper accommodation.

The first and last of these divisions have been provided for, by the grant to the Pennsylvania Rail Road Company of nine hundred feet of river front, at the foot of Liberty street, with the privilege of erecting such improvements thereon as may be necessary, and of continuing the track, to form with it a direct rail road communication. It is proposed to erect a structure, that will be an architec-

tural ornament to the city, and which will afford facilities for loading and discharging cargoes by machinery.

The proper accommodation of the rail road business imperatively requires a direct rail road connection between the outer depot of the Pennsylvania Rail Road, and the depot of the Pennsylvania and Ohio Rail Road, in Allegheny City; to form this connection, a new bridge across the Allegheny river, adapted to the use of locomotives, is required. It is very evident that the business of the line requires an arrangement of the kind proposed; competition demands that no unnecessary tax or restriction should be placed upon the trade, but when it is considered, that heavy freights will be carried at the low rate of perhaps one cent per ton, per mile, the drayage between the Pittsburg and Allegheny depots would be equivalent, in its practical effect, to an increase in the length of the road of seventy-five miles, sufficient to divert a large portion of business to other lines. For the passenger business, an eligible site has been selected, in a central and favorable location, which will, no doubt, prove entirely satisfactory to the citizens of Pittsburg.

#### PHILADELPHIA DEPOTS.

As the Pennsylvania Rail Road has no direct connection with any other road at its eastern terminus, the business requires but two principal divisions, viz.: the local trade of the city and districts, and the foreign trade, which requires a water transshipment.

The local freight will naturally be subdivided into that which requires protection, and that which admits of exposure.

The first consists of dry goods, groceries, and other articles, sent westwardly, and flour, bacon, and other produce, carried eastwardly.

In the accommodation of this business a central city depot is desirable, with the privilege of steam communication with West Philadelphia; but if this cannot be secured, no alternative appears to remain, but to locate the depot at West Philadelphia, and resort to drayage, or to a new species of conveyance, by means of light platform cars, built for street service, or to both.

The second subdivision of local freight, or that which admits of exposure, requires no depot building, but simply a sufficiently extender area. Of this character are lumber, coal, and live stock. The portion of the city property lot, which lies between the rail road and Bridgewater street, is well suited for the limited coal business, in which it is expedient for the Company to engage. Perhaps it might be found necessary to extend a track to the river, for transshipment into boats; but this can be done, if it should be found to be necessary, and requires no special provision at this time.

For lumber, the space required will depend upon the manner in which the business is conducted. If daily removals are required from consignees, the portion of the city lot which lies west of the



rail road, and not occupied by improvements, will probably be sufficient; if allowed to accumulate to any considerable extent, it may be necessary to encroach upon Powelton.

Live stock need not be brought so far as West Philadelphia; it can be unloaded opposite to, or above the Wire Bridge, at any place where the best arrangements can be made.

The second general division, or freight destined for other ports, and requiring a water transshipment, evidently should not be taxed with a drayage through the streets of Philadelphia. That would be a discrimination against it. If the Schuylkill river was navigable for vessels of sufficient size, the proper arrangement would probably be, to erect a depot at West Philadelphia of sufficient capacity, through which a direct transfer of freight, from the cars to the river craft, could be effected; but as vessels of large size cannot pass the Permanent Bridge, and no suitable location can be found below it, it may be necessary, if this branch of the business should ever become considerable, either to send produce by steam-water conveyance to the Delaware river, or construct a railway north or south of the city, connecting West Philadelphia with the Delaware front, upon which locomotive steam power can be employed.

#### PASSENGER DEPOT.

The passenger business of the Pennsylvania Rail Road requires that every attention should be paid to its proper accommodation, at the terminal depot. A consideration of this subject, as in the former case, suggests several divisions, viz.:—

Eastward passengers arriving at Philadelphia, who seek conveyance to a hotel, steamboat, or depot.

Eastward passengers, destined for private residences in the city or districts.

Westward passengers, leaving Philadelphia from a hotel, steamboat, or depot.

Westward passengers from private residences.

Whatever may be the location of the depot, the extended limits of the city and districts require that some vehicle should be used in the conveyance of passengers and their baggage, in which case the difference, in time and expense, between a location in West Philadelphia and one east of the Schuylkill, will be inconsiderable. Pedestrians will be better accommodated by a central city location; but against this, is the annoyance to the public, and expense to the Company, of horse power in the streets; also the delay from obstructions on the track of the City Rail Road, which, with a large freight business, will often prove, as it has already done, a most serious source of detention. With a location at West Philadelphia, the following arrangements would be practicable.

Baggage could be delivered by responsible parties, under contract with the Company, at any place agreed upon with the passenger, and at moderate expense—an arrangement which is now in operation. Each of the principal hotels could have an omnibus in attendance, on the arrival of the cars, as in Baltimore, Boston, and other cities, and it would be to the interest of other companies, to provide conveyances to their boats or depots, for passengers who did not wish to remain in the city.

If this arrangement should not be acceptable, a contract could be made to convey passengers in omnibuses, at a fixed charge, to any of the hotels, depots, or private residences, within the limits of the city; the baggage being sent either by separate conveyance, as already explained, or carried on the omnibus, at the pleasure of the passenger. Parties not wishing to be separated from their baggage, could retain their checks, and employ a hack or cab, many of which would always be in attendance. Imposition from hackmen could be prevented by proper regulations. Passengers arriving in the night, and wishing conveyance to private residences in inconvenient localities, would employ hacks; passengers leaving the city from any of the principal hotels could be carried, with their baggage, in omnibuses or hacks; from second rate hotels, or private residences, hacks could be employed.

A ticket office, with a convenient baggage-room, should be secured in some central location. Baggage brought to this office could be checked, and sent to West Philadelphia in a wagon; passengers could collect at this point, and be removed at short intervals by omnibuses running to the outer depot.

With a complete system similar to that described, or any other that may be considered preferable, the inconvenience of the location at West Philadelphia would not be serious, and the annoyance, delay, and expense of hauling passengers through the streets in cars would be avoided.

#### RESULTS.

The tables and statements which accompany this report, furnish full details of the receipts, expenditures and operations connected with the departments of which I have had the charge, and to them you are respectfully referred for particulars.

The whole receipts of the Pennsylvania Rail Road Company, for the year 1851, from all sources, have been \$1,039,565 49. The whole expenses, exclusive of interest on capital, \$706,640 19. The net profits, \$332,925 30, which is equivalent to six and three quarters per cent. on the whole cost of the portion of the road in use, and its equipment, including interest charged to capital—a result which must be most truly gratifying to the Stockholders, as it demonstrates, beyond the possibility of doubt, the great value of the improvement which their capital and liberality have called into

existence. If so much has been accomplished under unfavorable circumstances, what may not the future history of the road develop.

This result is due to the intrinsic advantages which nature has given to the route of the Pennsylvania Rail Road, and which would induce a certain amount of trade and travel to pass over it, even in opposition to efforts to prevent it.

The per centage could readily have been increased to ten, with better accommodation to the public generally, and the mercantile interests of Philadelphia, had the principles obtained in the regulation of the rates of freight of this road, which are recognized and adopted upon all others, and which have recently been admitted in part, upon the Pennsylvania Rail Road itself.

Notwithstanding the limited freight business, the expenses on the Pennsylvania Rail Road, *proper*, fall below the usual average of fifty per cent. of the receipts; but the most gratifying result is shown in the whole cost of running the trains per mile, which has been less than on any other rail road in the United States; less than on any of the best managed roads in New England; less than on the Georgia Rail Road, and forty per cent. less than the average of the following important roads, viz.—Fitchburg, Boston and Lowell, Boston and Providence, Boston and Worcester, Eastern, Western, Georgia, Boston and Maine, and Baltimore and Ohio. Should this result be attributed to other causes than good management, it will at least prove the absence of wasteful expenditure, in the transportation department.

With proper management, there can scarcely be a doubt, that *before* the completion of the road, the net receipts will have more than paid the whole of the interest allowed on the instalments previously paid in, and the Pennsylvania Rail Road will be entitled to the enviable and somewhat paradoxical distinction, of having commenced and continued to pay six per cent. dividends out of its receipts, two years before a car was able to pass over it.

Very respectfully submitted.

H. HAUPT,

*General Superintendent.*

## CONDENSED STATEMENT

*Of Expenses in detail of Pennsylvania Rail Road, from January  
1st, 1851 to December 31st, inclusive.*

## MAINTENANCE OF WAY.

|    |                                    |                   |
|----|------------------------------------|-------------------|
| To | Foremen and Laborers, - - - - -    | \$43,393 17       |
|    | Tools, - - - - -                   | 691 61            |
|    | Incidentals, - - - - -             | 441 77            |
|    | Superintendence, - - - - -         | 2,894 04          |
|    | Road and Hand Car, - - - - -       | 388 03            |
|    | Repairs of Bridges, &c., - - - - - | 3,247 79          |
|    | Stationery and Printing, - - - - - | 148 43            |
|    | Oil and Tallow, - - - - -          | 277 23            |
|    | Repairs of Buildings, - - - - -    | 21 28             |
|    | Spikes, - - - - -                  | 26 28             |
|    | Turntable, - - - - -               | 18 03             |
|    |                                    | <hr/> \$51,547 66 |

## MOTIVE POWER.

|                                              |                                       |                 |
|----------------------------------------------|---------------------------------------|-----------------|
| To                                           | Expenses of Water Stations, - - - - - | \$5,092 06      |
|                                              | Engineers, - - - - -                  | 11,054 54       |
|                                              | Firemen, - - - - -                    | 5,942 86        |
|                                              | Laborers, - - - - -                   | 1,771 53        |
|                                              | Cotton Waste, - - - - -               | 507 89          |
|                                              | Wood and Coal for Engines, - - - - -  | 43,586 26       |
|                                              | Coal for Shops, - - - - -             | 704 06          |
|                                              | Oil and Tallow, - - - - -             | 4,370 62        |
|                                              | Repairs of Engines, - - - - -         | 16,861 32       |
|                                              | Incidentals, - - - - -                | 402 20          |
|                                              | Repairs of Shops, - - - - -           | 233 17          |
|                                              | Superintendence, - - - - -            | 1,750 00        |
|                                              | Stationery and Printing, - - - - -    | 136 57          |
|                                              | Fluid, - - - - -                      | 237 93          |
|                                              | Tools, - - - - -                      | 834 67          |
|                                              | Depot Rent, - - - - -                 | 500 00          |
|                                              |                                       | <hr/> 93,985 68 |
| Deduct amount charged to construction, - - - | 15,812 00                             | <hr/> 78,173 68 |

## MAINTENANCE OF CARS.

|                                              |                                      |                                            |
|----------------------------------------------|--------------------------------------|--------------------------------------------|
| To                                           | Repairs of Passenger Cars, - - - - - | \$9,753 86                                 |
|                                              | Repairs of Freight Cars, - - - - -   | 14,795 89                                  |
|                                              | Incidentals, - - - - -               | 1 12                                       |
|                                              | Stationery and Printing, - - - - -   | 13 41                                      |
|                                              |                                      | <hr/> 24,564 28                            |
| Deduct amount charged to construction, - - - | 3,953 00                             | <hr/> 20,611 28                            |
|                                              |                                      | <hr/> Amount carried forward, \$150,332 62 |



Amount brought forward, \$150,332 62

## CONDUCTING TRANSPORTATION.

## PASSENGER DEPARTMENT.

|    |                                           |   |   |   |   |   |         |             |
|----|-------------------------------------------|---|---|---|---|---|---------|-------------|
| To | Conductors,                               | - | - | - | - | - | \$4,712 | 94          |
|    | Laborers, Brake and Baggage-men,          | - | - | - | - | - | 7,140   | 09          |
|    | Superintendence,                          | - | - | - | - | - | 1,137   | 33          |
|    | Ticket Agents,                            | - | - | - | - | - | 2,768   | 72          |
|    | Clerks,                                   | - | - | - | - | - | 1,505   | 05          |
|    | Incidentals,                              | - | - | - | - | - | 2,995   | 41          |
|    | Loss and Damage,                          | - | - | - | - | - | 613     | 24          |
|    | Stationery and Printing,                  | - | - | - | - | - | 1,253   | 02          |
|    | Fuel,                                     | - | - | - | - | - | 222     | 22          |
|    | Cleaning Cars,                            | - | - | - | - | - | 983     | 97          |
|    | Oil and Tallow,                           | - | - | - | - | - | 756     | 90          |
|    | State tolls on Freight,                   | - | - | - | - | - | 13,406  | 88          |
|    | Advertising,                              | - | - | - | - | - | 528     | 11          |
|    | Depot Rent,                               | - | - | - | - | - | 550     | 00          |
|    | Fluid,                                    | - | - | - | - | - | 269     | 04          |
|    | Harrisburg and Lancaster Rail Road Tolls, | - | - | - | - | - | 73,611  | 96          |
|    | Teaming at Columbia,                      | - | - | - | - | - | 66      | 00          |
|    | Office Rent and Furniture,                | - | - | - | - | - | 30      | 00          |
|    |                                           |   |   |   |   |   |         |             |
|    |                                           |   |   |   |   |   |         | *112,550 88 |

## FREIGHT DEPARTMENT.

|    |                                           |   |   |   |   |   |         |    |
|----|-------------------------------------------|---|---|---|---|---|---------|----|
| To | Conductors,                               | - | - | - | - | - | \$4,127 | 67 |
|    | Laborers and Brakemen,                    | - | - | - | - | - | 16,243  | 54 |
|    | Superintendence,                          | - | - | - | - | - | 986     | 33 |
|    | Station Agents,                           | - | - | - | - | - | 7,043   | 12 |
|    | Clerks,                                   | - | - | - | - | - | 6,756   | 21 |
|    | Incidentals,                              | - | - | - | - | - | 7,550   | 82 |
|    | Loss and Damage,                          | - | - | - | - | - | 1,278   | 38 |
|    | Stationery and Printing,                  | - | - | - | - | - | 1,273   | 06 |
|    | Fuel,                                     | - | - | - | - | - | 63      | 98 |
|    | Oil and Tallow,                           | - | - | - | - | - | 1,640   | 55 |
|    | State Tolls,                              | - | - | - | - | - | 104,795 | 80 |
|    | Depot Rent,                               | - | - | - | - | - | 2,550   | 74 |
|    | Repairs of Depot,                         | - | - | - | - | - | 76      | 26 |
|    | Teaming,                                  | - | - | - | - | - | 3,108   | 30 |
|    | Fluid,                                    | - | - | - | - | - | 35      | 91 |
|    | City Rail Road Tolls,                     | - | - | - | - | - | 675     | 16 |
|    | Canal Freight and Charges,                | - | - | - | - | - | 37,983  | 65 |
|    | Harrisburg and Lancaster Rail Road Tolls, | - | - | - | - | - | 14,247  | 67 |
|    | Advertising,                              | - | - | - | - | - | 519     | 97 |
|    | State Tax,                                | - | - | - | - | - | 3,856   | 75 |
|    | Office Rent and Furniture,                | - | - | - | - | - | 112     | 28 |

214,926 15

Deduct amount charged to construction, - 10,986 07

203,940 08

Total Amount, - - - - - \$466,823 58

## RECAPITULATION.

|                                                    |   |   |   |   |   |          |    |
|----------------------------------------------------|---|---|---|---|---|----------|----|
| Maintenance of Way,                                | - | - | - | - | - | \$51,547 | 66 |
| Motive Power,                                      | - | - | - | - | - | 78,173   | 68 |
| Maintenance of Cars,                               | - | - | - | - | - | 20,611   | 28 |
| Conducting Transportation, (Passenger Department,) |   |   |   |   |   | 112,550  | 88 |
| Conducting Transportation, (Freight Department,)   | - |   |   |   |   | 203,940  | 08 |

Total, - - - - - \$466,823 58

\*Expenses of passenger trains on Columbia and Portage Rail Road, not included in this sum.

*Statement of Receipts and Expenses of Pennsylvania Rail Road Company on their whole business, from January 1st, 1851, to January 1st, 1852.*

RECEIPTS.

|                                                                            |              |
|----------------------------------------------------------------------------|--------------|
| From Passengers, Mails, Express, &c., on Pennsylvania Rail Road, . . . . . | \$315,145 33 |
| From Lancaster, Columbia, and Portage Rail Roads, . . . . .                | 371,164 54   |
| Total Receipts from Passengers, Mails, &c., . . . . .                      | 686,309 77   |
| Total Receipts from Freight, . . . . .                                     | 353,255 72   |
| Total Receipts, . . . . .                                                  | 1,039,565 49 |

EXPENSES.

|                                                                                                                                                                                                   |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Maintenance of Way, . . . . .                                                                                                                                                                     | \$51,547 66      |
| Maintenance of Cars, . . . . .                                                                                                                                                                    | 20,611 28        |
| Motive Power, . . . . .                                                                                                                                                                           | 78,173 68        |
| Conducting Transportation, including<br>tolls and expenses on State and<br>Harrisburg and Lancaster R. R., and<br>Expenses of Passenger Trains on Co-<br>lumbia and Portage Rail Roads, . . . . . | 556,307 57       |
|                                                                                                                                                                                                   | <hr/> 706,640 19 |
| Balance, or Total Net Receipts, . . . . .                                                                                                                                                         | \$332,925 30     |

Cost of the whole average length of road in use for 1851, with equipment, . . . . . \$4,900,000

Net Profits equal to  $6\frac{3}{4}$  per cent. on whole cost of the portion of the road in use, and its equipment.

*REPORT of Tonnage of Articles sent from and received  
at Philadelphia, via Pennsylvania Rail Road, during the  
year 1851.*

| LIST OF ARTICLES.                                              | PITTSBURG. |           | LOCAL.     |            |
|----------------------------------------------------------------|------------|-----------|------------|------------|
|                                                                | FORWARDED. | RECEIVED. | FORWARDED. | RECEIVED.  |
| Fresh Meats, or Poultry, or Fish, . . . . .                    | .          | .         | .          | 199,786    |
| Boots, Shoes, Bonnets, &c. . . . .                             | 1,359,639  | 1,107     | 313,610    | 7,831      |
| Books and Stationery, . . . . .                                | 371,789    | 12,228    | 28,395     | .          |
| China, Glass, or Queensware, . . . . .                         | 859,065    | 1,319     | 195,419    | .          |
| Dry Goods, . . . . .                                           | 8,578,985  | .         | 2,447,994  | 62,120     |
| Butter, Eggs, &c., . . . . .                                   | .          | 211,779   | .          | 808,137    |
| Feed, . . . . .                                                | .          | .         | .          | 220,925    |
| Furniture, . . . . .                                           | 849,963    | 18,957    | 94,837     | 74,840     |
| Paper, of all kinds, . . . . .                                 | 9,569      | .         | 970        | .          |
| Live Stock, . . . . .                                          | .          | .         | .          | 1,521,720  |
| Window Glass, . . . . .                                        | .          | .         | 1,495      | .          |
| Wines and Liquors, Alcohol, &c., . . . . .                     | 52,301     | 65,830    | 104,940    | 255,282    |
| Wool and Yarn, . . . . .                                       | .          | 573,766   | 2,568      | 231,209    |
| Oil Cloth, . . . . .                                           | .          | 18,044    | .          | .          |
| Green and Dried Fruits, . . . . .                              | .          | 65,756    | 5,805      | 431,926    |
| Feathers, . . . . .                                            | .          | 82,293    | .          | 13,323     |
| Flour, . . . . .                                               | .          | 561,147   | .          | 3,674,068  |
| Grass, and other Seeds, . . . . .                              | .          | .         | .          | 460,755    |
| Grain of all kinds, . . . . .                                  | .          | 734,032   | .          | 1,232,058  |
| Drugs, Medicines, and Dye Stuffs, Ginseng,<br>Sumac, . . . . . | 7,158      | 111,568   | .          | 507,779    |
| Groceries, (except Coffee,) . . . . .                          | 1,268,301  | .         | 3,576,634  | .          |
| Hardware, . . . . .                                            | 1,090,261  | 45,473    | 710,698    | 181,471    |
| Marble, Mill-stones, &c., . . . . .                            | 85,511     | 47,528    | .          | 233,300    |
| Oysters, . . . . .                                             | .          | .         | 2,194      | .          |
| Machinery, . . . . .                                           | 15,677     | 9,755     | 5,687      | 54,705     |
| Stoves and Castings, . . . . .                                 | 2,762      | .         | 18,560     | 100,443    |
| Tobacco, . . . . .                                             | 15,526     | 390,822   | 25,100     | 11,600     |
| Blooms, . . . . .                                              | .          | .         | .          | 520,865    |
| Iron, Rolled, Hammered, &c., . . . . .                         | 197,444    | 16,650    | 261,790    | 120,152    |
| Nails and Spikes, . . . . .                                    | 31,411     | 19,410    | 474,749    | 1,018,570  |
| Cheese, . . . . .                                              | 4,225      | 2,545     | .          | 4,951      |
| Coffee and Fish, . . . . .                                     | 270,074    | .         | 1,039,915  | .          |
| Candles, . . . . .                                             | .          | 72,296    | .          | .          |
| Soap Westward, Rags Eastward, . . . . .                        | .          | 14,426    | .          | 35,900     |
| Wire Rope, . . . . .                                           | .          | .         | 52,900     | .          |
| Hides, Hams, &c., . . . . .                                    | 37,766     | 71,483    | 482,298    | 37,094     |
| Leather, . . . . .                                             | 85,838     | 554,941   | 78,385     | 1,317,723  |
| Lard and Lard Oil, . . . . .                                   | .          | 454,055   | .          | 34,871     |
| Potatoes, Turnips, &c., . . . . .                              | .          | 180       | .          | 20,145     |
| Salt Meat, . . . . .                                           | 16,656     | 4,693,237 | 13,086     | 637,700    |
| Earthenware, . . . . .                                         | .          | 243,136   | 8,850      | 75,355     |
| Tin, . . . . .                                                 | .          | .         | 19,204     | .          |
| Bark, . . . . .                                                | .          | .         | .          | 200,329    |
| Soda, Pot Ash and Whiting, . . . . .                           | 24,922     | 6,469     | 8,985      | .          |
| Lumber or Timber, . . . . .                                    | .          | .         | .          | 765,650    |
| Salt, Tar, Pitch and Rosin, . . . . .                          | .          | .         | 187,861    | .          |
| Plaster, . . . . .                                             | .          | .         | 32,960     | .          |
| Cements, . . . . .                                             | .          | .         | 231,637    | .          |
| Copper, . . . . .                                              | .          | .         | 6,334      | 1,680      |
| Pig Iron, . . . . .                                            | .          | 27,270    | .          | 810,790    |
| Miscellaneous, . . . . .                                       | 25,776     | 80,737    | 66,598     | 170,983    |
| Total, First Class, . . . . .                                  | 11,191,456 | 604,952   | 3,108,296  | 1,385,297  |
| Total, Second Class, . . . . .                                 | 2,778,634  | 2,384,552 | 4,254,902  | 2,933,961  |
| Total, Third Class, . . . . .                                  | 1,244,801  | 4,575,267 | 2,264,633  | 2,618,803  |
| Total, Fourth Class, . . . . .                                 | 44,728     | 1,643,068 | 869,631    | 9,118,017  |
| Total, . . . . .                                               | 15,259,619 | 9,207,839 | 10,497,462 | 16,056,078 |

*Total Number of Equivalent Through Passengers carried during the year 1851.*

| 1851.            | Columbia R. Road. |        | Harrisburg Road. |        | Col. Branch Road. |       | P. R. R., E. Division. |        | Portage Rail Road. |        | P. R. R., W. Division. |       |
|------------------|-------------------|--------|------------------|--------|-------------------|-------|------------------------|--------|--------------------|--------|------------------------|-------|
|                  | West.             | East.  | West.            | East.  | West.             | East. | West.                  | East.  | West.              | East.  | West.                  | East. |
| January, . . .   | 3,024             | 2,352  | 2,329            | 1,956  | 1,066             | 1,032 | 2,450                  | 2,103  | .                  | .      | .                      | .     |
| February, . . .  | 2,691             | 2,166  | 2,219            | 1,868  | 665               | 585   | 1,640                  | 1,273  | .                  | .      | .                      | .     |
| March, . . .     | 5,207             | 4,028  | 4,763            | 3,734  | 1,130             | 681   | 5,121                  | 4,097  | .                  | .      | .                      | .     |
| April, . . .     | 5,078             | 4,675  | 5,186            | 3,897  | 1,323             | 459   | 4,419                  | 2,751  | .                  | .      | .                      | .     |
| May, . . .       | 4,786             | 4,254  | 4,261            | 3,688  | 709               | 456   | 3,657                  | 2,647  | .                  | .      | .                      | .     |
| June, . . .      | 3,985             | 3,610  | 3,609            | 3,375  | 1,255             | 779   | 2,941                  | 2,276  | 1,747              | 1,598  | .                      | .     |
| July, . . .      | 4,810             | 4,496  | 3,550            | 3,114  | 770               | 548   | 3,147                  | 2,737  | 1,458              | 1,312  | .                      | .     |
| August, . . .    | 4,739             | 4,445  | 3,464            | 3,226  | 669               | 523   | 3,031                  | 1,638  | 2,029              | 1,454  | .                      | .     |
| September, . . . | 4,830             | 4,667  | 3,582            | 3,762  | 654               | 600   | 3,442                  | 2,375  | 2,752              | 1,708  | 2,928                  | 1,844 |
| October, . . .   | 5,683             | 4,426  | 5,300            | 3,608  | 1,195             | 739   | 3,799                  | 2,892  | 2,889              | 1,735  | 3,086                  | 1,963 |
| November, . . .  | 4,296             | 3,463  | 3,517            | 3,126  | 665               | 688   | 3,341                  | 2,176  | 2,169              | 1,463  | 2,593                  | 1,810 |
| December, . . .  | 3,635             | 3,563  | 2,875            | 2,562  | 1,161             | 1,208 | 2,549                  | 3,387  | 1,584              | 1,492  | 2,092                  | 2,693 |
| Totals, . . .    | 52,764            | 46,145 | 44,655           | 37,916 | 11,262            | 8,298 | 39,537                 | 30,352 | 14,628             | 10,762 | 10,699                 | 8,310 |

*Total Number of Passengers carried during the year 1851.*

| 1851.            | Columbia R. Road. |        | Harrisburg R. R. |        | Col. Branch Road. |        | P. R. R., E. Division. |        | Portage Rail Road. |        | P. R. R., W. Division. |       |
|------------------|-------------------|--------|------------------|--------|-------------------|--------|------------------------|--------|--------------------|--------|------------------------|-------|
|                  | West.             | East.  | West.            | East.  | West.             | East.  | West.                  | East.  | West.              | East.  | West.                  | East. |
| January, . . .   | 3,336             | 2,874  | 2,872            | 2,599  | 1,950             | 2,092  | 3,062                  | 2,629  | . . .              | . . .  | . . .                  | . . . |
| February, . . .  | 3,468             | 3,181  | 2,986            | 2,639  | 1,357             | 1,272  | 2,050                  | 1,589  | . . .              | . . .  | . . .                  | . . . |
| March, . . .     | 7,823             | 6,977  | 6,193            | 4,891  | 1,936             | 1,419  | 6,401                  | 5,121  | . . .              | . . .  | . . .                  | . . . |
| April, . . .     | 7,975             | 7,575  | 8,486            | 5,417  | 1,876             | 791    | 5,524                  | 3,439  | . . .              | . . .  | . . .                  | . . . |
| May, . . .       | 7,493             | 7,045  | 5,927            | 4,827  | 1,054             | 795    | 4,571                  | 3,309  | . . .              | . . .  | . . .                  | . . . |
| June, . . .      | 6,908             | 7,131  | 5,171            | 4,509  | 1,803             | 1,161  | 3,676                  | 2,845  | 2,307              | 2,176  | . . .                  | . . . |
| July, . . .      | 7,454             | 7,257  | 4,317            | 4,609  | 945               | 953    | 3,934                  | 3,321  | 1,902              | 1,964  | . . .                  | . . . |
| August, . . .    | 7,768             | 7,355  | 6,349            | 5,449  | 1,186             | 989    | 3,789                  | 2,047  | 2,377              | 2,340  | . . .                  | . . . |
| September, . . . | 6,975             | 6,995  | 4,648            | 4,868  | 1,093             | 1,018  | 4,302                  | 3,969  | 2,340              | 2,377  | 2,989                  | 2,065 |
| October, . . .   | 7,993             | 6,891  | 5,988            | 4,892  | 1,871             | 916    | 4,749                  | 3,615  | 3,674              | 2,274  | 3,187                  | 2,009 |
| November, . . .  | 6,086             | 5,397  | 4,730            | 4,084  | 1,064             | 935    | 4,186                  | 2,720  | 2,756              | 2,106  | 2,429                  | 1,807 |
| December, . . .  | 5,261             | 4,480  | 3,487            | 4,097  | 754               | 734    | 3,186                  | 4,234  | 2,104              | 1,768  | 2,796                  | 3,378 |
| Totals, . . .    | 78,540            | 73,158 | 61,154           | 52,881 | 16,889            | 13,075 | 49,430                 | 38,838 | 17,460             | 15,005 | 11,401                 | 9,259 |



| ENGINES.        | BUILDERS.         | Placed On Road. | Number of Drivers. | Size of Drivers. | Total Miles Run. | Cost of Repairs. | Cost per 100 miles run, of         |                                  |                                   |                                   | Total expenses per 100 miles run. | Repairs pr. ton on Drivers pr. 100 miles run. |         | Expenses per ton on drivers per 100 miles run. |        | Weight. | Weight on Drivers. |
|-----------------|-------------------|-----------------|--------------------|------------------|------------------|------------------|------------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------------------|---------|------------------------------------------------|--------|---------|--------------------|
|                 |                   |                 |                    |                  |                  |                  | Repairs.                           | Tallow, Oil and waste.           | Fuel.                             | D. Cts.                           |                                   | D. Cts.                                       | D. Cts. | D. Cts.                                        |        |         |                    |
| Allegheny, .    | M. W. Baldwin,    | July 9, 1850,   | 4                  | 4                | 37,083           | 742 20.9         | 2 00                               | 0 66 <sup>3</sup> / <sub>4</sub> | 7 29                              | 9 95 <sup>3</sup> / <sub>4</sub>  | 0 15 <sup>3</sup> / <sub>4</sub>  | 0 77                                          | 0 77    | 45,275                                         | 25,825 |         |                    |
| Armstrong, .    | "                 | Dec. 22, 1850,  | 4                  | 4                | 41,878           | 582 17.7         | 1 39                               | 0 51                             | 6 65                              | 8 55                              | 0 12                              | 0 75                                          | 38,675  | 22,875                                         |        |         |                    |
| Blair, .        | "                 | Sept. 23, 1849, | 2                  | 6                | 4,206            | 270 69.9         | 6 43                               | 1 01 <sup>1</sup> / <sub>2</sub> | 7 33 <sup>1</sup> / <sub>2</sub>  | 14 78                             | 0 61 <sup>1</sup> / <sub>4</sub>  | 1 40 <sup>3</sup> / <sub>4</sub>              | 48,150  | 21,000                                         |        |         |                    |
| Beaver, .       | "                 | Sept. 10, 1850, | 8                  | 3                | 15,874           | 440 83.9         | 2 73 <sup>3</sup> / <sub>4</sub>   | 1 44                             | 12 94                             | 17 15 <sup>3</sup> / <sub>4</sub> | 0 12 <sup>3</sup> / <sub>4</sub>  | 0 79                                          | 43,350  | 43,350                                         |        |         |                    |
| Cambria, .      | Norris & Brother, | Jan. 22, 1850,  | 4                  | 4                | 23,824           | 845 34.1         | 3 54 <sup>3</sup> / <sub>4</sub>   | 1 08 <sup>1</sup> / <sub>4</sub> | 7 22 <sup>1</sup> / <sub>4</sub>  | 12 35 <sup>3</sup> / <sub>4</sub> | 0 28                              | 0 97 <sup>3</sup> / <sub>4</sub>              | 40,825  | 25,320                                         |        |         |                    |
| Clarion, .      | "                 | July 22, 1850,  | 4                  | 6                | 25,039           | 449 11.9         | 1 79 <sup>1</sup> / <sub>4</sub>   | 1 59                             | 7 50 <sup>1</sup> / <sub>4</sub>  | 10 88                             | 0 14                              | 0 84 <sup>1</sup> / <sub>4</sub>              | 45,275  | 25,825                                         |        |         |                    |
| Climon, .       | M. W. Baldwin,    | Sept. 5, 1850,  | 4                  | 4                | 19,687           | 661 89.7         | 3 36 <sup>3</sup> / <sub>4</sub>   | 1 10 <sup>1</sup> / <sub>4</sub> | 10 98                             | 15 44                             | 0 20 <sup>1</sup> / <sub>2</sub>  | 1 21 <sup>1</sup> / <sub>2</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Columbia, .     | "                 | Sept. 18, 1850, | 4                  | 6                | 33,484           | 637 02.5         | 1 90 <sup>1</sup> / <sub>4</sub>   | 0 86 <sup>1</sup> / <sub>4</sub> | 9 22 <sup>1</sup> / <sub>4</sub>  | 11 99                             | 0 15                              | 0 91 <sup>1</sup> / <sub>4</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Centre, .       | "                 | Dec. 9, 1850,   | 4                  | 4                | 27,901           | 347 45.4         | 1 24 <sup>1</sup> / <sub>4</sub>   | 0 56 <sup>3</sup> / <sub>4</sub> | 9 81                              | 11 62 <sup>1</sup> / <sub>4</sub> | 0 09 <sup>3</sup> / <sub>4</sub>  | 0 91 <sup>1</sup> / <sub>4</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Clay, .         | Norris & Brother, | Oct. 16, 1849,  | 2                  | 4                | 11,434           | 359 98.4         | 3 23 <sup>1</sup> / <sub>2</sub>   | 1 20 <sup>1</sup> / <sub>2</sub> | 6 63 <sup>1</sup> / <sub>2</sub>  | 11 16 <sup>1</sup> / <sub>2</sub> | 0 44 <sup>1</sup> / <sub>4</sub>  | 1 53                                          | 23,350  | 14,000                                         |        |         |                    |
| Clearfield, .   | M. W. Baldwin,    | "               | 4                  | 4                | 7,722            | 139 71.5         | 1 81                               | 0 69                             | 7 22                              | 9 72                              | 0 14 <sup>1</sup> / <sub>4</sub>  | 0 70 <sup>1</sup> / <sub>2</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Crawford, .     | "                 | "               | 4                  | 6                | 6,913            | 161 08.5         | 2 33                               | 0 71                             | 7 15 <sup>3</sup> / <sub>4</sub>  | 10 19 <sup>3</sup> / <sub>4</sub> | 0 18 <sup>1</sup> / <sub>4</sub>  | 0 80 <sup>1</sup> / <sub>4</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Erie, .         | "                 | Oct. 7, 1850,   | 4                  | 4                | 17,091           | 217 07.8         | 1 27                               | 1 15 <sup>3</sup> / <sub>4</sub> | 13 16 <sup>1</sup> / <sub>4</sub> | 15 59                             | 0 10                              | 1 22 <sup>3</sup> / <sub>4</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Elk, .          | "                 | Oct. 16, 1850,  | 4                  | 6                | 17,958           | 580 10.7         | 3 23                               | 1 07 <sup>3</sup> / <sub>4</sub> | 11 64 <sup>3</sup> / <sub>4</sub> | 15 95 <sup>1</sup> / <sub>4</sub> | 0 25 <sup>1</sup> / <sub>4</sub>  | 1 25 <sup>1</sup> / <sub>4</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Franklin, .     | "                 | Oct. 16, 1849,  | 4                  | 4                | 13,247           | 341 55           | 2 57 <sup>3</sup> / <sub>4</sub>   | 1 30                             | 8 92                              | 12 70 <sup>3</sup> / <sub>4</sub> | 0 30 <sup>3</sup> / <sub>4</sub>  | 1 52 <sup>3</sup> / <sub>4</sub>              | 30,650  | 16,750                                         |        |         |                    |
| Huntingdon, .   | "                 | Nov. 16, 1849,  | 4                  | 6                | 22,671           | 1,008 81.6       | 4 45                               | 1 11 <sup>3</sup> / <sub>4</sub> | 9 08                              | 14 64 <sup>3</sup> / <sub>4</sub> | 0 34 <sup>3</sup> / <sub>4</sub>  | 1 13 <sup>1</sup> / <sub>4</sub>              | 43,275  | 25,825                                         |        |         |                    |
| Harrisburg, .   | "                 | Oct. 16, 1849,  | 2                  | 4                | 1,788            | 342 30.2         | 1 91 <sup>1</sup> / <sub>2</sub>   | 1 75 <sup>1</sup> / <sub>2</sub> | 2 93                              | 6 60                              | 0 32                              | 1 10                                          | 23,900  | 12,000                                         |        |         |                    |
| Helsley, *      | "                 | Oct. 16, 1849,  | 4                  | 4                | 2,038            | 2,145 32.2       | 105 26 <sup>1</sup> / <sub>2</sub> | 0 90 <sup>1</sup> / <sub>2</sub> | 0 00                              | 0 00                              | 0 00                              | 0 40                                          | 48,750  | 21,000                                         |        |         |                    |
| Indiana, .      | Norris & Brother, | Jan. 22, 1850,  | 4                  | 6                | 8,760            | 440 72.5         | 5 03                               | 0 58 <sup>3</sup> / <sub>4</sub> | 9 09                              | 14 71                             | 0 48                              | 1 40                                          | 45,275  | 25,825                                         |        |         |                    |
| Junata, .       | M. W. Baldwin,    | Nov. 2, 1849,   | 4                  | 6                | 17,332           | 988 55.8         | 3 61 <sup>3</sup> / <sub>4</sub>   | 0 90                             | 6 87 <sup>1</sup> / <sub>2</sub>  | 9 49                              | 0 28                              | 0 95                                          | 47,800  | 21,000                                         |        |         |                    |
| Mifflin, .      | "                 | Sept. 1, 1849,  | 2                  | 6                | 13,290           | 255 53.3         | 1 93 <sup>1</sup> / <sub>2</sub>   | 0 68                             | 9 23 <sup>1</sup> / <sub>2</sub>  | 13 16 <sup>1</sup> / <sub>4</sub> | 0 55 <sup>1</sup> / <sub>4</sub>  | 0 90 <sup>1</sup> / <sub>4</sub>              | 24,225  | 12,000                                         |        |         |                    |
| Penrose, .      | "                 | Oct. 16, 1849,  | 2                  | 4                | 10,544           | 350 10.2         | 3 32                               | 0 58 <sup>3</sup> / <sub>4</sub> | 9 25 <sup>1</sup> / <sub>2</sub>  | 13 16 <sup>1</sup> / <sub>4</sub> | 0 08 <sup>1</sup> / <sub>2</sub>  | 2 19 <sup>1</sup> / <sub>2</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Venango, .      | "                 | Oct. 29, 1850,  | 4                  | 6                | 28,450           | 310 77.8         | 1 09 <sup>1</sup> / <sub>4</sub>   | 0 58 <sup>3</sup> / <sub>4</sub> | 10 45 <sup>1</sup> / <sub>2</sub> | 12 11 <sup>1</sup> / <sub>4</sub> | 0 08 <sup>1</sup> / <sub>2</sub>  | 0 95 <sup>1</sup> / <sub>2</sub>              | 44,800  | 25,400                                         |        |         |                    |
| Wyoming, .      | "                 | Nov. 25, 1850,  | 4                  | 5                | 35,820           | 498 37.3         | 1 39                               | 0 58                             | 6 60 <sup>3</sup> / <sub>4</sub>  | 8 57 <sup>3</sup> / <sub>4</sub>  | 0 12                              | 0 75                                          | 36,675  | 22,875                                         |        |         |                    |
| Washington, .   | "                 | Oct. 16, 1849,  | 6                  | 3                | 7,678            | 446 43.7         | 5 81 <sup>1</sup> / <sub>2</sub>   | 1 12 <sup>1</sup> / <sub>4</sub> | 9 20 <sup>1</sup> / <sub>4</sub>  | 16 14                             | 0 33 <sup>1</sup> / <sub>2</sub>  | 0 93                                          | 34,675  | 34,675                                         |        |         |                    |
| Westmoreland, . | "                 | Sept. 7, 1850,  | 8                  | 3                | 15,963           | 588 07           | 3 68 <sup>1</sup> / <sub>4</sub>   | 1 50                             | 13 85                             | 19 03 <sup>1</sup> / <sub>4</sub> | 0 14 <sup>1</sup> / <sub>2</sub>  | 0 71 <sup>3</sup> / <sub>4</sub>              | 50,975  | 50,975                                         |        |         |                    |

\* Formerly the Porter—Rebuilt this year, 1851.

Average cost of repairs per 100 miles run on Pennsylvania Rail Road, \$2 92.

Average cost of repairs per 100 miles run on Baltimore and Ohio Rail Road, \$5 73.

STATEMENT of Cars owned by *Pennsylvania Rail Road Company*, December 31, 1851.

PASSENGER CARS.

|                                                       | Cars. | Wheels. |
|-------------------------------------------------------|-------|---------|
| Columbia Rail Road Line, eight wheels, . . . . .      | 14    | 112     |
| Phoenix Line, eight wheels, . . . . .                 | 5     | 40      |
| Pennsylvania R. R., Eastern Division, eight wheels, . | 16    | 128     |
| Pennsylvania R. R., Western Division, do . . . . .    | 3     | 24      |
| Allegheny Portage, eight wheels, . . . . .            | 6     | 48      |
| Total, . . . . .                                      | 44    | 352     |

EMIGRANT CARS.

|                                                       | Cars. | Wheels. |
|-------------------------------------------------------|-------|---------|
| Pennsylvania R. R., Eastern Division, eight wheels, . | 10    | 80      |
| Allegheny Portage, eight wheels, . . . . .            | 1     | 8       |
| Total, . . . . .                                      | 11    | 88      |

MAIL AND BAGGAGE CARS.

|                                                      | Cars. | Wheels. |
|------------------------------------------------------|-------|---------|
| Penna. R. R., Eastern Division, eight wheels, B. C., | 8     | 64      |
| Penna. R. R., Eastern Division, four wheels, B. C.,  | 1     | 4       |
| Penna. R. R., Eastern Division, eight wheels, M. C., | 6     | 48      |
| Penna. R. R., Western Division, eight wheels, B. C., | 1     | 8       |
| Total, . . . . .                                     | 16    | 124     |

FREIGHT CARS.

|                                        | Cars. | Wheels. |
|----------------------------------------|-------|---------|
| Box Cars, eight wheels, . . . . .      | 220   | 1760    |
| Box Cars, four wheels, . . . . .       | 100   | 400     |
| Stock Cars, eight wheels, . . . . .    | 96    | 768     |
| Platform Cars, eight wheels, . . . . . | 23    | 184     |
| Total, . . . . .                       | 439   | 3112    |

## REMARKS.

Two eight wheeled cars, (box freight,) have been converted into baggage cars.

One eight wheeled box freight car, was destroyed at Plane 4.

One four wheeled box freight car, was destroyed at Plane 4.

One eight wheeled box freight car, was destroyed by slide in cut near Lewistown.

One eight wheeled box freight car, was destroyed by run off on the Harrisburg and Lancaster Rail Road.

One Emigrant car, (letter D.,) was destroyed at Plane 4.

One Emigrant car, (W. B. Conway,) was destroyed at Plane 4.

One Emigrant car, (General Cass,) and six short Emigrant cars and seven short baggage cars were condemned and broken up—these cars were bought from the Commonwealth of Pennsylvania.

F. A. DENNING,  
*Car Inspector.*

*Harrisburg, January 1, 1852.*